# CONNECTING PRINCIPALS' PROFESSIONAL DEVELOPMENT TO PRACTICE: THE MEDIATING ROLES OF CONTEXT AND PHRONESIS

A Dissertation

by

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## ABSTRACT

The purpose of this qualitative case study was to build on a prior study that examined how principals acquired and applied new knowledge from professional development (PD). Findings from the prior study suggested a three-part model of principals' learning: (1) learning in a social context facilitates knowledge development, (2) a principals' context of practice influences learning, and (3) the application of PD learning is mediated by a principal's *phronesis,* or practical wisdom, about their context. A purposive sample of five elementary school principals from rural areas in a northern Midwestern state were interviewed and observed in their practice. Principals were asked to reflect on how they processed new knowledge during and after PD sessions. Principals were asked if they applied PD learning in practice and how. Finally, principals were asked what aspects of PD experiences were most useful and why. Data were analyzed using the model that emerged from the prior study as the conceptual framework.

Results from this study supported the prior study model of principals' PD learning. Additionally, results from the present study found principals engaged in a sensemaking process as they acquired and considered new knowledge in light of their contextual constraints and supports. Results also provided a deeper understanding of the contextual considerations that mediated principals' new learning. Additionally, results confirmed that application of new knowledge occurred as small changes in principals' practices mediated by principals' phronesis about their school community gained from experiences in their context. This study has added to the body of knowledge about how

principals acquire and apply learning from PD. That body of knowledge can be useful in informing the assessment, design, and delivery of PD programs for principals. Additionally, future research in other contexts of practice can build on this study in an effort to develop a theory into practice model representing how principals learn during PD and apply their learning in practice. As a part of future research, further probing of how and why principals apply learning in practice can help determine to what extent current PD is helping principals become more effective leaders.

## DEDICATION

I am fortunate to have had a career doing what I love: learning and teaching and learning more. This study is first dedicated to those who inspired me to want to learn and teach. Inspiration for learning and teaching came from my grandmothers, two aunts, an uncle, and my parents. Secondly, this study is dedicated to those I knew throughout my career as a teacher, assistant principal, principal, and a doctoral student. They challenged me to continue to learn so I could be a better teacher, a better leader, and a better scholar.

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I would also like to thank my committee members, Dr. Terah Venzant Chambers, Dr. Roger Goddard, and Dr. Ben Welch, for their support throughout my years as a doctoral student at Texas A&M University. Dr. Chambers gave me the opportunity to realize that I wanted to retire from the world of practice and join the world of scholarly work when I took her Foundations of Education course in the fall of 2007. Her lengthy syllabus introduced me to a world of knowledge I did not know existed. Dr. Goddard gave me the opportunity to do the work I was learning about when he asked me to join the School Leadership Improvement Study team as a graduate assistant. In that position I had the opportunity, under Dr. Madsen's careful guidance, to apply the data collection and data analysis skills I was learning about in my classes. Dr. Welch gave me self-confidence that my years of experience in practice were of value in the arena of scholarly work. He recognized the high expectations I had placed on myself as a practitioner and now as a student and applauded me for that. Also, thank you to my friends and colleagues

and the department faculty and staff for all the many ways they have supported me in my experience at Texas A&M University.

Last but certainly not least, I thank my husband, Vernon, for his support and understanding as I embarked on a “post-retirement” career as a full-time doctoral student with a part-time graduate assistantship. For seventeen years, he had patiently supported me as I pursued the challenges of school leadership. During that time, he encouraged me in my work and helped out where he could while building our house that he hoped I would one day stay home long enough to enjoy with him. Although he may not have understood why I couldn’t stay home to grow hay and work cows on our ranch after I retired as a principal, he continued to support my ambitions. Five years after retirement I have found it is possible to be ambitious about pursuing a life of scholarly inquiry and writing and to also make time for the sunsets at the ranch! Thank you, Vernon, for teaching me the most important lesson of all!

## NOMENCLATURE

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| BLPD | Balanced Leadership Professional Development |
| CPE | Continuing Professional Education |
| IES | Institute for Education Sciences |
| McREL | Mid-continent Research for Education and Learning |
| PD | Professional Development |
| SLIS | School Leadership Improvement Study |

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# CHAPTER I

# INTRODUCTION

For the past 40 years or more, the role of the principal has been evolving as a consequence of unfolding social and economic challenges. Events of the 1950s and 1960s (i.e., launch of Sputnik, Civil Rights movement) brought new criticisms and new expectations to schools (Goodwin, Cunningham, & Eagle, 2005). Two social-political expectations placed on schools resulted in new and increasingly complex demands placed on principals. First, concerns for racial equality in schools led to assessments of the availability of equal educational opportunities for all children regardless of race, ethnicity, or religion. In 1966, *Equality of Educational Opportunity,* referred to as the Coleman Report, concluded that school-based concentrations of poverty were contributing to the poor academic achievement of minority students and inequality in educational opportunity for minority students was pervasive and widespread (Coleman et al., 1966). Fiscal crises of the 1980s fueled the second social-political driver behind rising expectations for schools and their principals. Business leaders complained that American schools were failing to produce the workforce needed to promote a strong economy. In 1983, *A Nation at Risk* confirmed business leaders' concerns that not all students were receiving a quality education (Gardner, 1983). As a consequence, a series of recommendations were put forth for curriculum, standards, instructional time, and the role of the federal government in education.

In the ensuing decades, social and political forces have continued to reshape the role of the principal. The most recent influence on the reshaping of the principal's role came from the passage of the No Child Left Behind (NCLB) Act of 2001. Most notable among the reforms was the requirement that schools must demonstrate adequate yearly progress (AYP) toward the goal that all students meet passing standards on annual subject tests. Most recently, the NCLB-inspired national accountability movement has focused on identifying and supporting effective school reform initiatives committed to closing the achievement gap among student groups, the development of national curriculum standards, and the continuation of more rigorous standards-based proficiency assessments.

## Problem Statement

In addition to the increasing expectations of accountability for schools, a body of research finds that school leadership behavior has a significant, even if small and indirect, impact on student achievement (Leithwood & Jantzi, 2008; Leithwood, Louis, Anderson, & Wahlstrom, 2004; Leithwood & Riehl, 2005). For example, research has shown that transformational leadership skills foster the adoption of new ideas associated with reforms and promote teacher commitment and collaboration (Hallinger, 2003). Marks and Printy (2003) provided support for a perspective that integrated instructional and transformational views of leadership, observing that the two approaches to leadership are complementary and together they are related to instructional quality and student achievement. In a meta-analysis, Robinson, Lloyd, and Rowe (2008) found that both instructional and transformational leadership skills are positively related to student

achievement with notably larger effects associated with instructional leadership. This research has led to increased expectations for school principals.

Given the research on the importance of instructional leadership, questions are being raised about how to best prepare principals to lead improvement efforts that increase student learning outcomes. In addition to understanding how to best prepare principals, there is also a strong need to understand exactly how principals apply their ongoing professional development (PD) experiences to their practice (Firestone & Riehl, 2005; Lumby, Crow, & Pashiardis, 2008; Penlington, Kington, & Day, 2008). An understanding of how principals use their PD can lead to a better understanding of the leadership practices that contribute to school improvement.

However, a major gap in the preparation of school leaders is that we have not planned for continuing PD knowing that the context of leadership is changing continuously and drastically. Therefore, leadership skills are not static and cannot be learned only in preparation programs. Davis, Darling-Hammond, LaPointe, and Meyerson (2005) produced a report titled *Developing Successful Principals: Review of Research*, noting, "While there is increasing research on how principals influence school effectiveness, less is known about how to help principals develop the capacities that make a difference in how schools function and what students learn" (p. 4). Smylie, Bennett, Konkol, and Fendt (2005) also noted that the research does not examine different means of school leader development as they operate across school leaders' careers. Given the increases in accountability for student achievement and the influence of principal

leadership on achievement, leadership skill development must be an ongoing process throughout the lifespan of a leader's career.

As the single most influential factor on student achievement outside the classroom (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Leithwood et al., 2004), principal leadership is essential for school improvement efforts aimed at meeting measures of accountability. Additionally, it is not only critical to enact leadership in schools, but also train for the deployment of this leadership over a career lifespan.

Thus, we need to determine what kinds of PD lead to the acquisition of both instructional and transformational leadership skills. We also need to determine to what extent current PD is helping principals become instructional and transformational leaders. Until we know how to cultivate such leaders, we will be left to the current state of affairs concerning the PD of practicing principals. That current state of affairs leaves the development of instructional and transformational skills to chance.

## Research Objective

Instead of leaving the development of instructional and transformational skills of principals to chance, we need to determine what kinds of PD leads to the acquisition of these leadership skills, which have been found to be important to leadership effectiveness. Also, in order to justify the resources spent on leadership development many are asking to what extent current PD is helping principals become both instructional and transformational leaders. One way we can examine the usefulness of current PD is to attempt to understand how learning gained from PD becomes meaningful in practice for principals. A program of research, the School Leadership Improvement

Study (Goddard, 2008), is examining the fidelity and efficacy of a widely disseminated PD program for principals, McREL's Balanced Leadership Professional Development Program. Qualitative findings emerging from that longitudinal, mixed methods study have suggested a model of PD learning for principals. This model includes three phases of acquisition and application of new knowledge with practical wisdom, *phronesis*, mediating those three phases. The goal of the present study was to test, validate, and refine that prior research model of principals' acquisition, contextualization, and application of PD knowledge.

## Research Questions

To understand the effectiveness of current PD as well as what kinds of PD lead to the acquisition of instructional and transformational leadership skills, it is necessary to understand how principals take the learning gained from PD and make it meaningful and useful in their practice. Therefore, the research questions for the present study were designed to shed light on the process of using new learning in practice.

The following questions were examined to provide insight and information into how principals use their PD in their practice as they strive to become better instructional and transformational leaders.

1. How do principals process and contextualize their PD learning both in the PD context and once they return to their schools?
2. Do principals apply their PD learning in practice, and if so, how do they do that?

3. What aspects of PD learning experiences are most useful to principals and why?

A better understanding of how principals acquire and integrate new knowledge into every day practice may lead to a better understanding of how to deliver PD for principals.

## Significance of the Study

This study adds to a body of research concerned with how principals use new knowledge from PD in practice by examining thought processes that mediate between new knowledge acquisition and knowledge application. This phenomenon was explored from the perspective of the selected principals, and then the findings were applied to refine and validate a prior model.

Success in any organizational setting can be a function of the variations in commitment and motivation of personnel, the workplace environment, and external influences on the workplace (Leithwood et al., 2004). During a principal's tenure, any one or all of these conditions are prone to change. Therefore, leadership skills are not static and cannot be learned only in initial preparation programs (Davis et al., 2005).

Notably, a major shortcoming in the training of principals to lead school improvement efforts is we have not planned for continuing PD knowing the context of leadership is continuously changing. Given the increases in accountability for student achievement and the influence of principal leadership on achievement, leadership skill development must be an ongoing process throughout a leader's entire career (Smylie et

al., 2005). Consequently, it is not only critical to prepare future principals for leadership roles, but also to train for school leadership deployment over a career lifespan.

Findings from the present study can be used to inform (a) the assessment of school leadership PD programs, and (b) the determination of the kinds of PD that lead to the acquisition of instructional leadership skills that have a positive, significant impact on teaching and learning. In addition, this study provides a conceptual model others can use. This study adds to our understanding of knowledge acquisition, contextualization, and application by principals, so we can better understand how to design and deliver PD for principals. Until we know how to continuously cultivate instructional and transformational leaders, the PD of practicing principals will be left to chance.

## Overview of the Methodology

### Data Sources and Context

This qualitative case study employed a single case study design. The rationale for selecting a single case design is that it will provide a critical case for testing an emerging theory into practice model that represents how principals learn during PD and bring that learning into practice (Yin, 2009). A purposive sampling technique, snowball sampling, was used to select the sample from which the most can be learned (Merriam, 1998). A principal, identified from the SLIS case study work for rich and deeply reflective comments during those interviews, was asked to refer the researcher to other principals who would provide rich information related to the research questions.

The criteria used to select the case study principals were (a) the principal was a recipient of McREL's Balanced Leadership Professional Development (BLPD) as a part

of the SLIS; (b) the principal attended a high percentage (i.e., 85-100%) of the 20-day, 2-year BLPD program; and (c) the principal had opportunities to network with other principals from the same district or ISD who participated in the BLPD at the same time. Principals' schools were located in northern regions of a Midwestern state (designated as rural by U.S. Census Bureau standards), had relatively high poverty levels, and served students in Grades 3, 4, and/or 5.

**Data Collection**

Two semi-structured interviews with the principals took place during a school year Interview protocols were designed to solicit how principals determine the usefulness of their PD and if, and how, they apply new knowledge from PD in practice. Principal interviews were tape-recorded and transcribed to be analyzed for recurring themes (Seidman, 2006; Spradley, 1980).

Principals were also shadowed as they performed daily activities. In some cases, the researcher was invited to observe faculty meetings or staff meetings. In addition, the researcher received the principal's permission to talk informally with teachers about school wide goals, initiatives, and new instructional practices. Finally, the researcher visited each school at the beginning of the following school year to observe the principal and teachers interacting during a campus PD day. Observations of the principals, observations of meetings and PD activities, and conversations with teachers were recorded as field notes immediately following the events to insure reliability (Emerson, Fretz, & Shaw, 1995). Lastly, the researcher collected documents including school

improvement plans, faculty meeting agendas and weekly communiqués from the principal, which provide a rich source of contextually relevant information.

**Data Analysis and Interpretation**

A qualitative thematic strategy of data analysis, based on Glaser and Strauss' (1967) constant comparative approach, was used to categorize and make judgments about the meaning of the data (Boyatzis, 1998). The coding process was based on a prior research approach in which codes were developed using findings from the prior research model of principals' PD learning that emerged from the SLIS work (Schroeder & Madsen, 2010). Through this process of coding and creating categories, themes or patterns that describe and organize the data were identified to illustrate how principals think about their PD experiences and how they apply their new knowledge in their school context. After completing the data analysis, generalizations were developed based on the themes. These generalizations were then compared and contrasted to the SLIS prior research model to test, refine, and validate that model and thus add to the understanding of how principals acquire and contextualize new knowledge from PD experiences and make decisions about applying their PD learning in practice.

Several techniques were to increase the probability of producing credible findings and interpretations from the study (Creswell, 2007; Lincoln & Guba, 1985). First, there was prolonged engagement and persistent observation in the research setting during repeated visits. Second, the researcher collected data from multiple sources to substantiate (triangulate) the findings from the principals' interviews (Lincoln & Guba, 1985). Third, credibility of the emerging themes was validated through member checking

by taking the themes back to the respondents for their review and reaction (Lincoln & Guba, 1985) and through peer debriefing by members of the researcher's dissertation committee (Merriam, 1998). Reliability of the findings was addressed by the researcher's maintenance of an audit trail and keeping a reflexive journal during the study (Lincoln & Guba, 1985).

## Overview of the Conceptual Framework

This dissertation builds on recent findings from the School Leadership Improvement Study (SLIS) by investigating how principals acquire and contextualize new knowledge gained from PD experiences and what aspects of the learning, if any, are applied in practice. The findings from this dissertation will be used to test, validate, and refine the prior research model that emerged from prior SLIS research (Schroeder & Madsen, 2010, 2011).

The SLIS program of research was designed to assess the causal impact of a school principal leadership training program developed by Mid-continent Research for Education and Learning (McREL), called the Balanced Leadership Professional Development Program® (BLPD). The research was funded by the Institute of Education Sciences (Grant# R305A080696) and conducted by the Education Leadership Research Center (ELRC) at Texas A&M University. Through the qualitative case study findings from that research project, a model emerged suggesting principals employ a progressive and recursive thinking process to mediate between new knowledge acquisition and its application. This model, represented in Figure 1, provided the conceptual framework for the present study. That model depicted three phases of acquisition and application of new

knowledge during and after PD sessions. Throughout these phases the principal's *phronesis,* or practical knowledge, about their school community served as a guide in constructing new knowledge and applying it in practice.

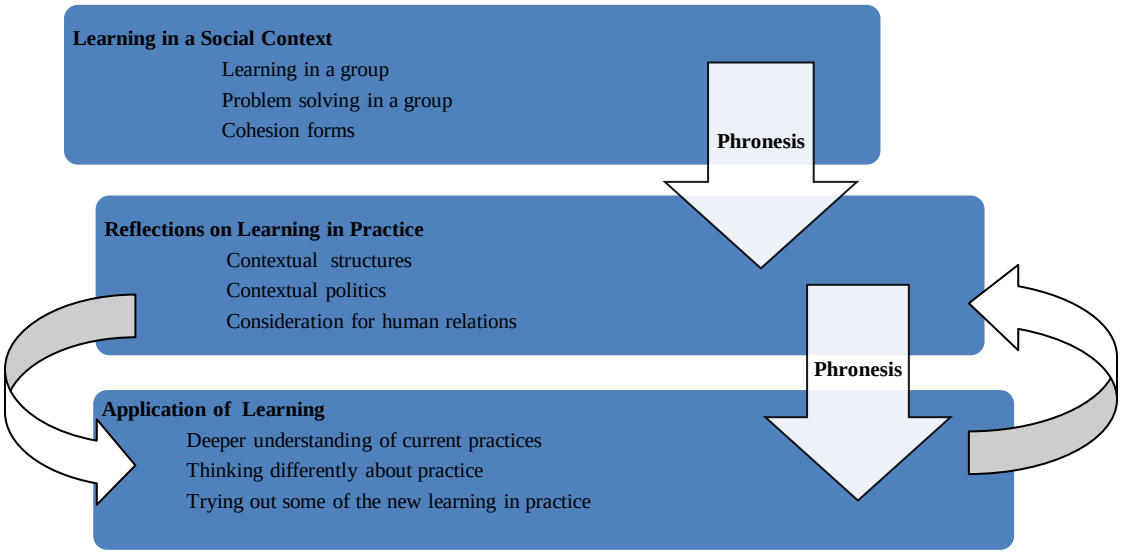


*Figure 1.* A proposed model for principals' acquisition, contextualization, and application of professional development knowledge.

The prior research findings indicated learning in a social context gave principals opportunities for interactions that facilitated learning the new material. Principals exchanged ideas, engaged in problem solving in a group, and formed supportive networks extending beyond the sessions. During the PD sessions principals were connecting new knowledge to prior knowledge through constructivist and transformative learning processes as suggested by Daley (2000) in her model of continuing professional education (CPE). Principals' thinking about the new research-based knowledge during

the PD sessions was also influenced by *phronesis*, or practical wisdom, gained from their experiences in their context (Halverson, 2004).

The SLIS findings also detailed the principals' reflections about the PD learning once they were back in their context of practice. Principals contextualized their new knowledge by considering their organizational structures, politics, and concern for human relations with their constituents. In this way, knowledge development is linked to practice and context as proposed by Daley (2000) and application of learning was influenced by principals' *phronesis,* or practical wisdom (Halverson, 2004). Furthermore, findings from the SLIS research suggested application of new learning ranged from deeper understanding of current practices to thinking differently about some practices to small changes in practice similar to the incremental changes in practice that Barnes, Camburn, Sanders, and Sebastian (2010) found in their study of PD outcomes for principals.

## Limitations of the Study

There are several limitations to the present study. First, data was collected only from five principals serving in small, very rural schools. These schools were located in a northern state that has experienced severe economic downturns prior to 2008. As a consequence of their geographic isolation from larger population areas and the limited resources of their school districts, these principals have had limited opportunities for PD experiences. This small sample of rural elementary school principals limits the ability to generalize the findings to all principals.

## Overview of the Chapters

This record of study is divided into five chapters. Chapter I provides an overview of the entire study beginning with background information about school leadership that led to the problem statement. Chapter I also introduces the research objective, research questions, the significance of the study, the methodology, the conceptual framework, and the limitations of the present study.

Chapter II reviews literature and research related to principal leadership, the influence of the culture of accountability on principal leadership, and PD for principals. Chapter II also presents the conceptual framework that grounds the present study. That presentation includes a review of the literature and research related to adult learning concepts. Specifically, Daley's (2000) model of learning in CPE, which framed the prior research upon which the present study is based, is explained. Also reviewed are Halverson's (2004) concept of phronesis for school leadership and the role of sense-making (Weick, 1995) in principals' applications of new learning.

Chapter III explains the methodology used for the present study including the study design, data sources and selection procedures, data collection procedures, and the process of data analysis. Chapter IV presents the findings obtained from this research and Chapter V provides a discussion of the study findings.

# CHAPTER II

# LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

A review of the literature was completed to gain an understanding of two topics of research related to the present study. Those topics are principal leadership and PD for principals. After a review of the research on those topics, the conceptual framework for this study is presented.

The intent of the present study was to test, validate, and refine a model, developed from prior research, which represents principals' thinking about and application of PD experiences. Therefore, that model served as the conceptual framework for the present study. The prior research model was grounded in research on adult learning. The two conceptualizations that provided the framework for the prior research also informed this present research and are discussed in this chapter. Daley's (2000) model of continuing professional education (CPE) is discussed first followed by Halverson's concept of *phronesis*, or practical wisdom, for school leaders. Halverson's work provides an elaboration of the link between knowledge development, professional practice, and the context of practice put forth by Daley in her model.

## Principal Leadership

An interest in examining the role of the principal took hold with the publication of research on schools that were effective in educating poor and minority children living in urban areas. That research led to a quest to define and explain effective school leadership in successful urban schools. As a result of the focus on the instructional leadership of

principals in successful schools, expectations for principals changed. The ensuing changing role of the principal is chronicled next by an overview of the research related to school leadership.

**Effective Schools and the Importance of the Principal**

Ron Edmonds (1979) was among those who asserted that student performance did not evolve from family background as suggested by the Coleman Report of 1966. Instead, Edmonds contended that student performance stemmed from the school's response, under the leadership of the principal, to a child's family background. Researchers began to identify characteristics of urban schools where poor children were performing well based on national norms for reading achievement (Brookover & Lezotte, 1977; Edmonds, 1979; Edmonds & Frederiksen, 1978; Weber, 1971). In particular, studies found one of the characteristics of effective schools was the presence of a strong leader. A strong principal was assertive in his or her role as the instructional leader, set high expectations for teachers and students, channeled resources to the achievement of learning goals, and monitored progress of students toward the attainment of the learning goals (Edmonds, 1979).

**The Emergence of Instructional Leadership**

Consequently, findings from effective schools research shifted the focus of school improvement efforts to the work of the principal. As the instructional leader a principal coordinated, controlled, and supervised the technical core of the school—teaching and learning, curriculum and instruction. Therefore, during the 1980s scholars sought a better understanding of the role of the principal as the instructional leader (Bossert, Dwyer,

Rowan, & Lee, 1982; Hallinger & Murphy, 1985). After reviewing what was known about effective instructional management, Bossert et al. (1982) identified four areas of principal leadership: (a) goals and production emphasis, (b) power and decision making, (c) organization and co-ordination, and (d) human relations skills. Bossert et al. also proposed that principals' instructional management behaviors affected both the organization and the climate of the school. Therefore, according to Bossert et al., the heart of the principal's role as an instructional manager was to understand how school and classroom organization affected learning for students.

Likewise, Hallinger and Murphy (1985) sought to better understand the role of principals in effective schools. They identified three gaps in the research: (a) the research to date had not interpreted the broad dimensions of effectiveness into specific practices, (b) most of the research had been conducted in elementary schools so the findings might not be generalizable, and (c) without an explanatory model it was not possible to suggest causality or to understand the interaction effects of the variables.

Hallinger and Murphy (1985) proposed a model of instructional leadership that encompassed three broad dimensions. The first dimension, defining the school's mission, included establishing clear, measurable goals and communicating those goals to all in the school community. The second dimension, managing the instructional program, included observing and evaluating instruction, coordinating curriculum across all grade levels and departments, and monitoring student progress through standardized criterion-referenced testing. The third dimension, promoting school climate, involved protecting teaching time from interruptions, providing PD, providing recognition of teachers' efforts, reinforcing

high academic standards with expectations that students must master basic skills, recognizing and students' academic improvement, and being very visible in the school. Hallinger and Murphy's model extended the work of Bossert et al. (1982) and others (i.e., Brookover et al., 1978; Leithwood & Montgomery, 1982; Levine & Stark, 1982; Purkey & Smith, 1983) by specifying the behaviors associated with effective school leadership. However, empirical evidence of the effectiveness of these behaviors was still lacking.

As a result of calls for empirical validation of a model of instructional leadership Heck, Larsen, and Marcoulides (1990) conducted a study to test the causal relationship between certain principal instructional leadership behaviors and school-level student achievement. They labeled the variables they believed as directly and indirectly influencing student achievement school governance structure, instructional organization, and climate. After controlling for variables such as socioeconomic status and home language background, Heck et al. concluded that instructional leadership is a complex, multi-dimensional construct. The results of the study by Heck et al. (1990) provided empirical support for the work of Bossert et al. (1982) and Hallinger and Murphy (1985) suggesting that principals can positively affect student achievement by applying certain behaviors consistently and effectively. Heck et al. urged these findings should be used as the basis for developing criteria to evaluate the effectiveness of principal performance and lead to more effective leadership development programs.

Meanwhile scholars continued to pursue a better understanding of the relationship between principal leadership and student achievement. Heck and Hallinger (1998) looked at studies from 1980 through 1995 that had examined different types of leadership effects

on student outcomes. They concluded from their review that studies which used a mediated-effects model combined with antecedent variables most consistently showed a pattern of positive, indirect effects of principal leadership on student achievement.

Furthermore, Hallinger (2003) examined several studies suggesting principals influence school effectiveness and student outcomes indirectly (e.g., Leithwood, Begley, & Cousins, 1990; Southworth, 2002). Hallinger concluded from this review that the principal's greatest influence is in shaping the mission of the school and in aligning resources and structures to support the mission. Notably, another finding emerged from Hallinger's review that would change the focus for school leadership development. Hallinger found very few studies established a relationship between a principal's direct involvement, hands-on approach to the supervision of curriculum and instruction as an instructional leader and student outcomes. This finding provided some support for another model of school leadership that emerged during the 1990s. The model of transformational leadership represented a departure from the instructional leadership model that guided much of the PD for principals in the 1980s.

**The Emergence of Transformational Leadership**

The early findings of effective schools research were often directed at schools needing substantial improvement. The model of instructional leadership, emerging from the effective schools research, represented a top-down, policy driven approach. The role of the principal was viewed an example of heroic leadership where only a small number of people had the skills or traits to meet the expectations associated with a role assigned to one person. As a reaction to the enormity of the role of the instructional leader and the

top-down policy initiatives of the 1980s, transformational leadership found a place in the education community (Hallinger, 2003).

As scholars exploring leadership effects during the 1990s, Leithwood (1994) and Ogawa and Bossert (1995) had suggested that efforts to improve student achievement had relied too heavily on looking for evidence of leadership from one person or in one part of the organization. Leithwood (1994) suggested that an important component of school reform efforts was being ignored. He suggested that school reform meant school restructuring.

Leithwood (1994) found the leadership practices needed for school restructuring focused on the organizational structure and culture such as developing a shared vision, creating positive work cultures, and sharing leadership. Likewise, Ogawa and Bossert (1995) suggested leadership was about organizing the structures and resources and influencing individuals so that leadership flows throughout an organization at all levels rather than residing in a bureaucratic, hierarchical structure. As expectations increased for schools, the transformational leadership components of shared goals, shared culture, and continuous learning for teachers, released principals from the heroic expectations of the instructional leader as it was first conceptualized.

Leadership research continued to seek an understanding of the school conditions that evolved as a result of transformational leadership. Leithwood (1994) suggested that the effects of the principal's influence as a transformational leader could be seen by changes in teachers: changes in teaching techniques, adoption of new instructional programs, changes in behaviors toward students, or changes in interactions with other

teacher. Leithwood and Jantzi (1999) found that transformational leadership and school conditions explained 17% of the variance in classroom conditions.

Griffith (2004) also found that transformational leadership, through job satisfaction, had an indirect but positive effect on student achievement. Griffith concluded that the transformational leadership behaviors of individual consideration, inspiration, and intellectual stimulation affected broad school conditions related to outcomes of staff satisfaction with their work environment, which was related to work performance. Leithwood and Jantzi (2006) also found direct effects of transformational leadership on teachers' work environment, teachers' motivation, and teachers' capacities. The strongest of these effects was in teacher capacity and teacher motivation. The findings from this longitudinal, large-scale study showed that leadership in concert with teacher motivation, capacity, and work setting explained 25% to 35% of the variance on teachers' classroom practices. However, their model failed to explain any variation in gains in student achievement. Questions continued to be raised about how to improve the classroom practices of teachers so that student learning is increased. Thus, the influence of instructional leadership came back into the discussion (Hallinger, 2003).

**The Integration of Leadership Models**

In an effort to reconcile the two predominant conceptualizations of school leadership that had emerged Hallinger (2003) highlighted several similarities between instructional and transformational leadership. Both models were based on a shared purpose for the work in schools, both promoted high expectations for staff and students, and both focused on improving teaching and learning. Additionally, both models would

have the principal align the organization of the school and allocation of resources with school goals. Both models would have the principal provide opportunities for teachers to engage in continuous learning to improve their teaching. Finally, the principal as an instructional leader and as a transformational leader must be visible in the school community and model the shared expectations and values.

Marks and Printy (2003) advanced the integration of the two leadership models by proposing a model where transformational leadership operated in tandem with shared instructional leadership. In shared instructional leadership, teachers assumed responsibility for their improvement in teaching; however, principals provided the opportunities for professional growth. Marks and Printy suggested that transformational leadership, with its focus on inspiring and motivating teachers to work for the attainment of organizational goals, and shared instructional leadership, with its focus on curriculum and instruction, complemented each other. The results of their study found that the integration of transformational leadership and shared instructional leadership had a substantial influence on school effectiveness as measured by the quality of teaching observed in the school and student achievement outcomes.

In a recent study, Supovitz, Sirinides, and May (2010) found that while principals have an indirect impact student achievement, as transformational leaders they have a direct impact on teachers who interact with students directly. The findings of Supovitz et al. were that when principals work through other leaders in their schools to influence what goes on inside of classrooms, classroom practices in language arts and mathematics are changed and student achievement in language arts improves. This leadership practice

of working through teacher peers to influence changes in instructional practices represents an integration of the instructional and transformational leadership models. Although instructional leadership as a top-down, hands-on model for the supervision of curriculum, instruction, and teacher effectiveness was being replaced by other models emerging from research, the interest in studying instructional leadership continued.

**Renewed Interest in Instructional Leadership**

In fact, Robinson et al. (2008) discarded the notion of an integrated model of leadership and considered the two leadership models, instructional and transformational, separately. The study by Robinson et al. consisted of two meta-analyses. The first meta-analysis compared the effects of transformational leadership and instructional leadership on student outcomes. The second meta-analysis compared the effectives of five leadership practices on student outcomes.

Results of the first meta-analysis showed the average effect of instructional leadership on student outcomes to be three to four times greater than the effects of transformational leadership (Robinson et al., 2008). Robinson et al. concluded that school leadership involves more than sharing inspirations and building relationships, and instead requires that those relationships be focused on very specific pedagogical work. Contrary to Marks and Printy (2003), who suggested that transformational leadership is a necessary even if not a sufficient condition for shared instructional leadership, Robinson et al. (2008) rejected the need for transformational leadership theory to develop a school leader's ability to improve teaching and learning. Instead, Robinson et al. concluded that

instructional leadership measures were increasingly integrating both task and relationship measures.

In the second meta-analysis, Robinson et al. (2008) considered five leadership practices that required the integration of task and relationship behaviors. They found the leadership practice most strongly associated with positive student achievement was that of promoting and participating in teacher learning and development. Moderate effects for student achievement were associated with goal-setting, planning, coordinating, and evaluating the curriculum and teaching. There were several implications from this widely acclaimed study. First, the interest in instructional leadership re-emerged. Second, leadership indicators should come from an understanding of how teachers' practices have a positive impact on student achievement in order to better understand the impact leaders have on their teachers.

As a consequence of the ongoing study of effective leadership indicators, there has been a renewed interest in the study of leadership preparation and development (Lumby et al., 2008). The call for a better understanding of how to prepare school leaders for the challenges of the 21st century is in part a result of the consensus among scholars that the influence of school leadership on student achievement is second only to that of classroom teaching (Leithwood, Harris, & Hopkins, 2008). Additionally, in recent years the role of the principal has become increasingly complex. Besides creating school and classroom environments to support teaching and learning, principals must also ensure the efficient and productive use of resources at a time when schools are being asked to do more with less. Population growth associated with changing demographics, growing

research on teaching and learning, and increases in technology have all made effective preparation as well as continuous learning imperative for principals. Consequently, calls to rethink PD for school leaders have been ongoing for more than a decade (Barnes et al., 2010; Bush, 2009; Hallinger & Anast, 1992; Kelley & Shaw, 2009; Kochan, Bredeson, & Riehl, 2002; Leithwood et al., 2004). This literature review now presents an overview of what is known currently about PD for principals.

## Professional Development for Principals

First, a summary of the scholarly positions on PD for school leaders is provided from a historical perspective. Next, different components of principal PD programs and different PD models are reviewed. Characteristics common to the PD programs studied by scholars are presented. Then, based on a review of the research, a discussion of what is known about the application of PD learning in practice is provided. Finally, some recent perspectives on the study of PD for practicing principals are presented. From these recent perspectives, the rationale for this dissertation emerges.

### A Historical Review of the Study of Principal Professional Development

The interest in understanding how to best prepare principals to lead improvement efforts is not new in the 21st century. Following the first wave of school effectiveness studies (e.g., Edmonds, 1979), researchers began to call for an examination of the PD provided for principals. For example, Fullan (1985) included the development and clarification of the role of the principal as one of the necessary components of any school improvement plan. Citing scholarly work (e.g., Bossert et al., 1982; Leithwood & Montgomery, 1982), Fullan noted that principals were influential in the adoption of

innovations when they support teachers with assistance during implementation of new practices. Fullan advocated for incremental and ongoing efforts to increase the capacity of principals to be school improvement leaders. According to Fullan, these efforts should include the provision of leadership courses and workshops directly focused on the role of the principal with an emphasis on the kinds of leadership actions that support change and innovation implementation.

In addition, Leithwood, Stanley, and Montgomery (1984) called for attention to be given not only to the type of in-service training provided for principals, but also the effects of such training. The concern they raised about the study of PD programs for principals is still being raised today. That concern is that the outcomes of the many PD programs available to principals are not clearly linked to school improvement and student achievement (Smylie et al., 2005). Thus, the discussion among scholars of the need to build principals' capacity for instructional leadership through PD focused on determining what to include in PD in order to facilitate student learning.

**What Should the Focus of Professional Development Be?**

Given the consensus among scholars (e.g., Smylie et al., 2005) that principals' PD should address the principal's role as it is linked to school improvement, scholars sought to understand how practices common to effective administrators came to exist in certain individuals. Leithwood and Steinbach (1992) suggested that rather than limiting the focus of PD programs to identifying the specific behaviors of effective principals, PD programs should also be focusing on the following: (a) problem solving skills of effective administrators, (b) different needs of experienced principals and novice principals, (c)

creating coherence between preparation programs and on-going learning opportunities, (d) providing opportunities to reflect on action in action, and (e) providing support for principals to implement new learning. Additional studies of existing leadership preparation and PD programs led to many of these same recommendations (Bredeson & Scribner, 2000; Grogan & Andrews, 2002; Kochran et al., 2002; Peterson, 2002; Peterson & Kelley, 2002).

**A focus on problem-solving skills.** Leithwood and Steinbach (1992) proposed that efforts to improve school effectiveness would be more successful if there was a focus on improving principals' thinking and problem solving capabilities. They sought to understand the problem-solving processes of effective principals, to shed light on how this expertise develops, and determine what can be done through instructional programs to enhance the problem solving skills of principals. Their study included an experimental and a control group of voluntary participants made up of both experienced and new administrators. The treatment was participation in a 4-day program over a 4-month period based on a model of administrative problem solving grounded in their research on school leadership.

Based on questionnaires and written protocols of four hypothetical problems completed by participants as pre- and post-test measures, Leithwood and Steinbach (1992) found that problem solving was improved through systematic instruction. The problem solving processes of the experimental group were improved by a program of instruction providing procedural knowledge and opportunities for participants to share their knowledge acquired through experiences. Leithwood and Steinbach also found

tentative support for problem-based instruction over non-instructional, on-the-job learning. They concluded that on-the-job experience is a slow and unreliable way to improve problem-solving expertise. Their study provided support for PD that delivered instruction through authentic problem-solving including small-group collaborative work and access to the experiential knowledge of other principals.

Barnett (1995) also supported the development of problem solving skills through small group collaborative work. He suggested that cognitive coaching offered a way for mentors to help novice principals develop the mental capacities required to be expert problem solvers. Barnett suggested the use of reflective questioning to clarify and probe the mentees' responses to problems would develop the novice's cognitive skills in problem solving. Support for this model of on-going learning to develop expertise in problem solving was also offered by Prestine (1993) in an apprenticeship-in-problem-solving approach for educational administration programs. Likewise, Hallinger, Leithwood, and Murphy (1993) noted it was important to understand the nature of expertise, determine what knowledge is useful to educational leaders for problem solving, and determine the types of PD experiences best promote the development of leadership expertise in problem-solving.

**A focus on the needs of novice and experienced principals.** In addition to a focus on the needs of novice principals, researchers have recently called for focused efforts to better understand the role that PD plays in leadership development for experienced principals throughout their careers. Scholars assert that ongoing learning around current issues of equity and excellence for all is essential for both novice and

experienced principals (Firestone & Riehl, 2005). Tucker and Codding (2002) noted that many experienced principals who led their schools to substantial improvements in student achievement could offer no connections between the knowledge gained from their initial preparation courses to the skills needed to turn a failing school around. As a result, the need for continuing PD for experienced principals has become critical.

As consensus about the importance of continuing on-going learning for principals has grown, so have PD opportunities grown in number and kind. One concern that has emerged with the plethora of staff development offerings is that most PD programs provided by school districts or professional associations make little or no distinction between the needs of the novice and the experienced principal. Tirozzi (2002) cautioned that the lack of distinction between the PD experiences of a novice and the PD needs of an experienced principal sends novice principals a subtle message that once they received their first principal position and survived their first year, serious attention to their PD is over. Support for the idea that PD needs to be differentiated during a principal's career was suggested by Leithwood and Steinbach (1992) in their study of the improvement of principals' problem solving through systematic instruction. Work by Salomon and Perkins (1998) also led Leithwood and Steinbach to suggest that for principals with considerable expertise the response to problems may become so automatic as to inhibit reflection on current practices. Therefore, PD for experienced principals that includes guided reflection on entrenched practices may be beneficial in helping these principals respond to novel problems in their context (Bredeson, 2004; Leithwood & Steinbach, 1992).

**Connecting preparation and professional development.** Expanding the idea that there is little distinction between PD for novice and experienced principals, Peterson (2002) observed that PD programs offered for practicing principals are independent of or loosely linked to initial preparation programs. Thus, Peterson proposed that PD should not only be career-staged, but also linked to preparation programs to provide coordinated, expanded learning and reduce redundant, fragmented learning. Currently, ongoing PD for principals is offered by various organizations ranging from national and state associations, regional education service centers, and independent consultants and for-profit organizations contracting with local districts (Young & Grogan, 2008). For the most part, the programs that have emerged as a result of this focus on leadership preparation and development have a well-articulated purpose, designed specific curriculum, and quality delivery of the program. However, the vast array of choices of PD may make it difficult for principals to choose a program that best meets their needs (Peterson, 2002).

Echoing Peterson's (2002) concern with the design of PD programs, Bredeson (2002) noted that some PD conferences provide opportunities for vendor trade shows to such an extent that principals may see PD as a search for cure-all solutions to problems. Bredeson, too, was concerned with what he called convenience courses characterized by fragmented and often faddish learning experiences that were not aligned with principals' needs or school goals.

**Opportunities for reflection as part of professional development.** Another component that scholars recommended be included in PD programs is opportunities to

engage in reflection and critical analysis around issues of diversity in race, ethnicity, and gender (Davis et al., 2005). The importance of opportunities for reflection about action both while in the PD setting and while in action is noted frequently (Grogan & Andrews, 2002; Kochran et al., 2002). In their assessment of PD, Kochran et al. (2002) noted that too often quick fixes to problems are sought rather than dedicating time for reflection and study of the situation. Too often principals focused on compliance with external mandates rather than the creative development of new ideas to meet those demands. Bredeson's (2002) definition of PD encompassed the importance of reflection and creative thinking. Bredeson found that PD served different functions: the implementation of new programs, compliance with mandates, and a function he termed "enhancement" (p. 666) with the goal being the improvement of effectiveness. Bredeson described enhancement PD as "learning opportunities that engage educators' creative and reflective capacities in ways that strengthen their practice" (p. 663).

**Support for principals to implement new learning.** In addition to opportunities for reflection as a part of PD, Kochran et al. (2002) added that PD must be redefined so principals are supported in the use of reflective learning and inquiry with their staff. Similarly, Bredeson and Scribner (2000) noted the link and support between districts and agencies that provide the PD must be strengthened if new knowledge is going to be internalized in practice. In fact, Guskey (2000) added organizational support and change to his model of PD evaluation because he found that a previous model (Kirkpatrick, 1996) did not sufficiently explain why, despite the fidelity of training programs' implementations, PD efforts were not producing results for student learning (Guskey,

2000; Harvard Family Research Project, 2005). In his evaluation of PD programs, Guskey asked if implementation of new knowledge was advocated, facilitated and supported, if support was public and overt, if successes were shared and celebrated, if problems with implementation were addressed efficiently, and if resources were provided to implement the PD.

The need to provide support for principals to implement their professional learning has been cited by others since the earliest responses to the effective schools research. Fullan (1985), in his call for leadership courses and workshops, also called for assistance for principals following PD, just as is provided for teachers. Likewise, Marsh (1992), in his study of the California School Leadership Academy (CSLA), noted that a challenge the program faced was how to sustain a reflective focus about instruction by the principals past the training experience. He suggested that coaching was critical for the transfer of CSLA training to the context of principals' practice.

More recently, Leithwood, Mascall, and Jantzi (2012) offered some findings from their study that shed light on how the school district can support principals as they implement changes and innovations. Leithwood, Mascall, et al. proposed that one of the most compelling ways districts can influence teaching and learning is through efforts to improve principals' feelings of professional efficacy related to school improvement. First, Leithwood, Mascall, et al. used quantitative evidence from their study to show that principal efficacy is an essential link between district initiatives, school conditions, and student learning. In particular, the district's investment in instructional leadership was significantly related (.55) to leaders' collective efficacy. Further, a significant

relationship was found between annual achievement scores for students (percent of students achieving at or above the proficient level) and leaders' collective efficacy as well as the combined measure of leaders' collective efficacy and leaders' self-efficacy.

Additionally, Leithwood, Anderson, and Louis (2012) offered some insights into how central office staff developed school leaders' efficacy. For example, Leithwood, Anderson, et al. reported the rankings principals gave to the district conditions having the greatest positive contribution to their sense of efficacy. Of the eight district conditions, investment in both school and district level leadership was ranked third. The specific description of this investment in school and district level leadership is "provides a wide range of professional development opportunities to help build the instructional leadership capacities of principals" (Leithwood, Anderson, et al., 2012, p. 122). Additional district actions associated with this finding included providing support for principals' PD, providing individualized support for principals based on the challenges of their schools, and providing a curriculum with supporting PD for principals and teachers (Leithwood, Anderson, et al., 2012).

Moreover, Leithwood, Anderson, et al. (2012) found that while principals generally view their districts' PD efforts positively, the most positive views of district support related to PD were as follows: (a) the district encourages principals and teachers to implement their learning, (b) school principals are encouraged to work together to improve their instructional leadership, and (c) district leaders work with struggling principals to improve their instructional leadership.

Finally, Leithwood, Anderson, et al. (2012) examined whether there is a link between district efforts to develop the instructional leadership capacities of principals and student achievement. Regardless of how much principals' like a PD experience and report that it improves their practice, the final assessment of investments in PD are student achievement. Based on causal modeling techniques, Leithwood, Anderson, et al. found approximately 7% of the variance in student achievement was explained through the direct relationship between collective efficacy and student achievement. Professional development of school leaders had an insignificant direct path coefficient and the use of targets and data had a negative significant relationship. Leithwood, Anderson, et al. offered an explanation for this unexpected finding. They suggested that an emphasis on reaching achievement targets and the use of data must be balanced with support through PD so as to build a robust sense of collective leadership throughout the district. In summary, these findings suggest that in addition to setting goals for improvement of student achievement and holding principals and teachers responsible for reaching them, districts must also provide leadership development that principals believe helps them to improve their leadership competencies.

Thus, there is consensus among scholars that it is important to provide continuing PD for principals and to support principals in their use of the new learning. However, as Kochran et al. (2002) and others have noted, there is more to understand than to simply provide PD for principals. It is also important to develop an understanding of how to design and deliver PD so new learning is integrated into practice. Therefore, scholars

have engaged in studying the effectiveness of various examples and models of PD for principals.

**Models of Principal Professional Development**

In this decade, the focus on studying what should be and what is included in leadership preparation programs and ongoing PD has continued (Grogan & Andrews, 2002; Peterson & Kelley, 2002; Smylie et al., 2005). Also, in recent years, state boards of education have implemented policies requiring practicing school administrators to earn a certain number of hours of continuing education credits within a certain number of years. Providers of these continuing education credits include national and state principal associations, district and regional education centers, individual consultants, universities, and for profit organizations. Consequently, PD programs have increased in number and in types of programs. Some programs lasted as long as several years in formal degree programs or were as short as 1-day workshops. Also, the focus of the programs ranged from general topics such as leadership or specific topics related to principal leadership such as developing professional communities. Thus, programs were varied in their orientations, purposes, and presentation practices. As part of the process to identify patterns, trends, challenges, and opportunities that existed in the various PD programs, scholars have first acknowledged there are different models of PD.

Fenwick and Pierce (2002) identified three different philosophical orientations that guide the PD of school leaders. First, the traditional model, found in most university preparation programs, focused on the preparation of entry-level principals (Grogan & Andrews, 2002; Peterson & Kelley, 2002). In recent years, other education agencies such

as Regional Education Service Centers in Texas have developed and offer certification programs (see www.esc4.net). Learning activities are general in focus, and are not always adjusted to the needs of the individual or reflective of the individual's school community. These service centers also offer practicing principals opportunities for PD through workshops addressing topics such as building teacher capacity, legal issues, and state initiatives (see www.esc4.net).

Second, Fenwick and Pierce (2002) identified the craft model of PD. This model is similar to internship experiences where a novice shadows a principal in a real school setting. Like an apprenticeship, an internship is a planned, sustained experience supervised by an expert to provide job-embedded learning (Gaudreau, 2006). The goal of internship programs is to provide connections for aspiring principals between theory and practice. Internships can provide an understanding of the role of the principal for the aspiring principal and provide opportunities to develop leadership skills (Browne-Ferrigno & Muth, 2004; Risen & Tripses, 2008). However, although most school administrator preparation programs require internships, these programs vary in duration and scope. Internships are often completed while the intern maintains currently assigned job duties such as those of a classroom teacher. Unfortunately, many internship experiences consist of observational experiences rather than hands-on leadership experiences (Earley, 2009). In fact, a study of 61 principal preparation programs concluded that many current internship programs are producing poorly qualified and unprepared principals (Southern Regional Education Board [SREB], 2005).

The reflective inquiry approach is the name given to a third model by Fenwick and Pierce (2002). Networking, mentoring, and reflective reading and writing characterized this model. The source of knowledge in this model was in the self-reflections about the challenges, successes, and failures the principal had experienced. Most states require that new principals have an assigned mentor to help them understand the expectations of the position and to provide advice about the challenges of the position. Recent work by Grissom and Harrington (2010) found support for an association between principal participation in mentoring and coaching and principal performance as measured by the degree to which the school met district and state standards.

Additionally, Fenwick and Pierce (2002) studied a type of PD for principals known as principal centers. They found that principal centers included aspects of the traditional, craft, and reflective inquiry models of PD. Principal centers provided a forum for both practicing and aspiring principals to explore, discuss, and reflect on current leadership issues. The formats provided by these centers were varied and included conferences and small study groups. Many principal centers were modeled after The Principals Center at the Harvard Graduate School of Education. This center, founded in 1981, has provided the impetus for principal centers throughout the country. Some principal centers are partnerships between foundations and school systems, professional associations and school systems, and universities and school systems.

Other researchers have also studied principal centers. For example, Peterson (2002) analyzed several programs based on the principal center model for their focus and

purpose, the curriculum and instructional strategies, location, internal coherence, and integration of technology. Some of the programs he analyzed were the Gheens Academy, a partnership between the Gheens Foundation and the Jefferson County, Kentucky Public School District; The Harvard Principals' Center Institute, a national reform program; and a more comprehensive, career-staged set of programs, Chicago Leadership Academies for Supporting Success (CLASS), a cooperative effort between the Chicago Principals and Administrators Association and the Chicago public schools. Following his analysis of various programs, Peterson asserted that ongoing PD programs should be linked to preparation programs to reduce redundancy and fragmentation in learning. He also advised that programs should be designed with careful attention to structural and cultural features. Structural features included the curriculum and instructional approaches. Cultural features included symbols and activities to build a sense of community and foster a motivation for continuous learning. He acknowledged that while there was no one best way to design PD programs, some of the programs he studied provided useful models of structural and cultural features.

Offering a different way to classify programs than that used by Fenwick and Pierce (2002), Leithwood and Levin (2008) developed a typology to describe the various leadership development efforts in existence. The eight components of their typology were structure, career stage, duration, nature of tasks, specialization, credentials offered, location, and provider. They offered this typology as a way to identify the wide range of PD opportunities. Furthermore, they suggested that different program models will obviously have different effects. Therefore, it is important to recognize the differences in

the components of PD programs when assessing leadership development opportunities for principals.

Recently, a closer look at a wide variety of available PD programs was carried out by Darling-Hammond, LaPointe, Meyerson, Orr, and Cohen (2007). From their studies, these researchers identified some common characteristics of these programs. These common features shared by the programs studied by Darling-Hammond et al. are presented next.

**Consensus about Characteristics of Professional Development Programs**

After a 3-year study of PD programs for principals, Darling-Hammond et al. (2007) concluded it was possible to identify specific characteristics of the approaches and designs of effective programs. Furthermore, they concluded that preparation and in-service programs produced leaders who engaged in effective practices as reported by the leaders themselves and their teachers. The effective programs aimed to develop specific leadership practices utilizing an approach where learning was grounded in practice with on the job observations to analyze classroom practice, supervision, and PD. Networks, study groups, and mentoring were developed in these programs to provide ongoing support for principals.

There is general agreement among scholars with the findings of Darling-Hammond et al. (2007) that leadership development curriculums should reflect a continuum based on career stages (Bredeson, 2004; Grogan & Andrews, 2002; Peterson, 2002; Peterson & Kelley, 2002) and connect preparation and induction learning experiences with ongoing PD (Peterson, 2002; Young, Crow, Murphy, & Ogawa, 2009).

In fact, Leithwood et al. (2004) argued that leadership skills are not static and cannot be learned only in preparation programs. They pointed out that organizational performance can be a function of variations in the commitment and motivation of personnel, the environment of the workplace, and the external influences on the workplace. Thus, they asserted it is likely that during a school leader's career, changes in motivation of personnel, organizational structures, or external influences will take place making ongoing PD a necessity for experienced principals.

Another characteristic of effective programs identified by Darling-Hammond et al. (2007) and also supported by others was that effective programs are job-embedded, meaning closely linked to participants' work and aligned with the current realities and needs principals face (Kelley & Shaw, 2009; Peterson & Kelley, 2002; Young et al., 2009). Therefore, the importance of district and school contextual issues that influence leadership behavior has been recognized by a call among scholars for participant-centered learning to provide a bridge between the new learning and work (Bush, 2009). Likewise, others noted that ongoing learning related to practice results in emancipatory knowledge such that learning can be integrated into practice with others in the school. In this way, the learning of the principal can be connected to the learning of the teachers (Kochran et al., 2002).

Another agreed upon characteristic of effective principal PD programs found by Darling-Hammond et al. (2007) was the inclusion of expert practitioners as facilitators and the use of small study groups (Houle, 2006; Peterson, 2002). In particular, collegial problem-solving experiences in a professionally safe environment such as a cohort design

was a characteristic of exemplar programs (Davis et al., 2005; Houle, 2006; Kelley & Shaw, 2009; Smylie et al., 2005). In this way, problem-based learning using authentic problems in small-group collaborative work involving reflective inquiry was effective in advancing the problem-solving skills of principals (Copland, 2000; Hallinger & Anast, 1992; Leithwood & Steinbach, 1992).

In summary, the following conclusions were consistent across many studies of principal PD programs. Leadership skills do fall on a continuum from novice to expert and PD programs should acknowledge this. Learning activities need to include small group, collegial problem-solving opportunities and be context-based. Therefore, job-embedded, on-going PD providing opportunities for authentic problem solving and reflective inquiry in collaborative groups offered opportunities for principals to move beyond their current ways of functioning. These PD opportunities helped principals develop the kinds of leadership skills needed to set direction, develop people, redesign the organization, and improve the instructional program (Bredeson, 2004; Fink & Resnick, 2001). Finally, district support and feedback as principals implemented their new learning was also found to be an essential component of principal PD. This support took many forms including principal networking groups, individualized coaching, and mentoring (Fullan, 1985; Hallinger & Anast, 1992; Marsh, 1992). However, even when all of these components are a part of principal PD programs, a question remains. Are principals implementing the learning from their PD experiences?

**Is Professional Development Applied in Practice?**

Although there was support for the effectiveness of PD programs that met individual needs, provided small group problem solving experiences, were job-embedded and ongoing over a period of time, Peterson and Kelley (2002) concluded the lack of empirical evidence about the impact of PD programs on school effectiveness and student achievement was problematic. Much of the empirical data is limited to participants' reactions. Many of the program descriptions stated that the programs receive high praise from participants who also reported participation caused them to make changes in their leadership behaviors. So while these programs provided opportunities for learning and self-renewal, it was unknown what impact these programs had on the efficacy of practitioners as measured by student achievement. Therefore, scholars have called for more empirical work aimed at uncovering the outcomes of PD (Barnes et al., 2010; Firestone & Riehl, 2005; Lumby et al., 2008; Peterson & Kelley, 2002; Smylie et al., 2005).

In response to this need for more empirical data to assess the impact of principal PD programs on principal efficacy as measured by student achievement, the School Leadership Improvement Study is presently evaluating McREL's Balanced Leadership Professional Development® (BLPD) program for principals. The School Leadership Improvement Study (SLIS) is an IES sponsored randomized control trial designed to test the treatment fidelity and school level efficacy of this widely disseminated program. Setting aside the conceptual foundation of McREL's BLPD program, preliminary findings indicate uniformly high levels of fidelity across the dimensions of program

design, interventionist training, training delivery, and receipt (Schroeder et al.., 2012). Mid-term study results across seventeen leadership responsibilities and concepts show that the treatment principals benefited from participation in the BLPD based on surveys completed post-intervention and on location at their schools (Miller, Goddard, Kim, Goddard, & Schroeder, 2012). Further data collection and analysis are ongoing to assess if the training brings about changes in principals' job performance behavior, which may ultimately bring about changes that produce improvement in schools' instructional programs and student achievement.

In addition to research examining the impact of principal PD on student achievement, other recent research looked at the impact of the PD on the principal. Barnes et al. (2010) looked at the relationship between learning, knowledge use, and change in a group of urban principals. Barnes et al. were interested in knowing not only the extent to which the principals changed their practice after PD experiences, but also the characteristics of that change and the process by which that change took place.

In their study, Barnes et al. (2010) asserted that professional performance involves both cognitive and behavioral processes. They suggested that principals engage in the cognitive activity of sensemaking as well as the behavioral activity of knowledge use in such a way that refinements in understanding, thinking, and doing are not sequential or interdependent. Therefore, Barnes et al. concluded that while principal competencies can be developed within continuing PD activities, the expectation for the outcomes of these program interventions should be incremental changes rather than spectacular turn-around changes in principal leadership.

Likewise, other scholars have begun to examine the processes by which principals acquire and apply their PD experiences (Schroeder & Madsen, 2010). Preliminary findings suggested that principals contextualized their new knowledge by considering their organizational structures, politics, and concern for human relations with their constituents. Principals reflected on their experiences in their present school community and prior experiences as a leader in other contexts. Additionally, findings suggested application of new learning ranged from deeper understanding of leadership practices to small changes in practice similar to the incremental changes in practice that Barnes et al. (2010) found in their study of PD outcomes for principals. While studying the impact of principal PD on school improvement efforts continues, also examining the impact of principal PD in other ways may shed light on how to better design and deliver principal PD and on how principals use their PD learning experiences.

**Identification of Program Characteristics Is Insufficient**

Recently, a few scholars have suggested that the consideration of program characteristics alone is insufficient when describing PD opportunities. Webster-Wright (2009) offered an alternative conceptualization of the study of PD. A review of the literature found that most PD focuses on delivering program and content knowledge. Webster-Wright contended the discourse about PD should also be informed by an understanding of professionals' perspectives of the PD experiences. In other words, as Barnes et al. (2010) and Schroeder and Madsen (2011) considered, there is a need to understand how professionals process their learning and then make changes in their practice. Webster-Wright (2009) asserted that researchers need to embrace a more

holistic study of PD and listen to professionals talk about their learning experiences. She further proposed that professional knowing is embodied, contextual, and embedded in daily experiences and reflective action.

Similarly, Dall'Alba and Sandberg (2006) proposed an alternative view of PD. Dall'Alba and Sandberg criticized PD models based on a horizontal progression of skills that increase with experience. Instead, they suggested that professionals organize their knowledge and skills into particular professional behaviors. Both Dall'Alba and Sandberg and Webster-Wright (2009) concluded that PD research should address the embodied understanding of practice by investigating professional learning from the learner's perspective. This dissertation adopts this approach to the study of principals' PD by examining principals' reflections about PD experiences as well as their application of new learning.

## Conceptual Framework

The conceptual framework for this dissertation comes from prior research findings that emerged from the School Leadership Improvement Study (SLIS). The SLIS is an IES sponsored, mixed methods, randomized control trial designed to test the treatment fidelity and school-level efficacy of McREL's Balanced Leadership Professional Development® program for principals in rural Michigan elementary schools. The intent of this dissertation is to test, validate, and refine a prior research model representing principals' thinking processes during and after PD learning experiences.

Results from the qualitative case study findings of the SLIS suggested principals employed a progressive and recursive thinking process to mediate between new

knowledge acquired in PD and the application of that knowledge. It was found in the prior research that these thinking processes influenced the application of new knowledge gained from the PD experiences.

Three phases of acquisition and application of new knowledge during and after PD sessions are illustrated by this prior research model (see Figure 1 in Chapter I). Throughout these phases the principal's phronesis, or practical knowledge, about their school community served as a guide in applying new knowledge in their practice.

Like the prior research model, the present study was also framed by Daley's (2000) model of CPE and Halverson's (2004) concept of the phronesis, or practical wisdom, in school leadership. Daley's model is grounded in adult learning theories. As a way to make these connections between learning and practice, two theories related to adult learning were utilized by Daley in her model of CPE. Daley proposed that knowledge is developed through both constructivist learning and transformative learning processes. Those adult learning theories will be discussed next followed by a review of Daley's work and a review of Halverson's concept of phronesis for school leaders.

**Constructivist Learning Theory**

Constructivist learning theory has its roots in cognitive and social cognitive learning theories. Cognitive learning theories emerged in the twentieth century to challenge the prevailing view of learning espoused by behaviorists such as Thorndike and Skinner. The common premise of cognitive learning theory is that there is a focus on the internal mental processes, which the learner controls. The components of learning, according to cognitive learning theory, are the organization of the new knowledge to be

learned, the learner's prior knowledge, and the processes involved in recognizing, comprehending and storing information (Merriam, Caffarella, & Baumgartner, 2007).

Social cognitive learning theory began as a combination of elements from the behaviorists' and the cognitivists' orientations toward learning. The behaviorist view of learning suggested that people must imitate what they have observed and be reinforced for those behaviors in order for learning to occur (Hergenhahn & Olson, 2001). Bandura (1977) focused on the cognitive processes associated with observational learning. He identified four processes that take place in observational learning: (a) attention to new behaviors, (b) the ability to remember observing the behaviors, (c) the ability to change symbolic representations into actions, and (d) the motivation to enact the observed behaviors. Later, Bandura's social learning theory came to be known as social cognitive learning theory. Social cognitive learning theory recognized not only the social origins of human thought and action, but also the cognitive portion of thought and action. The cognitive portion was the causal contribution of thought processes to the learner's motivation, feelings, and subsequent actions (Merriam et al., 2007). Bandura's (1986) three-part learning model included the learning, the person, and the environment and was always set in a social context. Therefore, Bandura's social cognitive theory of learning is relevant to efforts to understand how principals learn because it takes into account the principal as a learner and the environment in which the principal learns and works.

Constructivist learning theory, one of the components of Daley's (2000) model, shares some of the same components as cognitive and social cognitive learning theories. Like cognitivists, constructivist learning theorists proposed that learning was an active

process; a process of making meaning out of new knowledge combined with knowledge gained from prior experiences. Constructivism as a theory of learning received a great amount of attention from scholars in the 1990s. As a theory, it encompassed a range of viewpoints influenced by scholars such as Ernst von Glaserfeld, Kant, Kuhn, Piaget, Dewey, and Vygotsky (Phillips, 1995; Powell & Kalina, 2009). In general, constructivists did not believe that people arrived in the world with their "cognitive data banks" (Phillips, 1995, p. 5) already filled with factual knowledge. Nor did constructivists believe that knowledge was acquired simply by observation or immersion. Although constructivists did not necessarily agree on how knowledge was constructed by the learner, they did agree that knowledge was not handed down, but instead was created by the learner (Phillips, 1995). Some constructivists focused on learning as an individual activity and other constructivists viewed learning as a social activity (Merriam et al., 2007). These two views of constructivism have been called cognitive constructivism and social constructivism (Powell & Kalina, 2009).

The works of Piaget (1976) and Vygotsky (1978) are associated with cognitive and social constructivism. In his work with children, Piaget observed how children assimilated and accommodated new knowledge as they search for equilibrium. This search for equilibrium occurred as a result of receiving new knowledge that did not fit with previous understandings. New knowledge had to be assimilated into prior understandings, or schemas. Sometimes these schemas had to be changed, or accommodated, upon receiving new information. Vygotsky, considered to be the originator of social constructivism, asserted that knowledge is constructed through social

interactions such as conversations and activities. Social constructivists view language, culture, collaboration, social interaction, and personal critical thinking as crucial to the learning process (Powell & Kalina, 2009). Like Piaget, most of Vygotsky's work was with children and their learning in the classroom. Social constructivism as a learning theory was not limited in its application to children. By engaging with others, the adult learner had opportunities to critically explore others' points of views about new knowledge. Consequently, the meaning of the new knowledge could be constructed and interpreted in new ways as a result of the interactions with others. Thus, learning by the individual occurred collaboratively and cooperatively with others (Gergen, 1995). Perhaps it is this learning in a social context that principals are referring to when they suggested that they enjoyed PD experiences that gave them an opportunity to exchange ideas with and learn from other principals (Houle, 2006).

However, Salomon and Perkins (1998) advised that the notion of individual learning should not be dismissed by social constructivists. Rather they suggested that individual and social aspects of learning interact and strengthen each other in what they call a "reciprocal spiral relationship" (p. 18). By participating in different learning systems, with varying amounts of social mediation and collectivity at different points in the learning process, the individual and the group benefited by strengthening their knowledge and understandings. Daley (1997, 1999) found evidence of the individual and group learning processes in her work with experienced nurses. One nurse stated, "I take little pieces of what I learn from many places and put them together until I have my own

picture" (Daley, 1997, p. 109). Another nurse stated, "I get my best ideas and learn the most after having a discussion with my colleagues" (Daley, 1999, p. 143).

Much of the scholarly discussion about constructivism as a learning theory focused on its application to learning in classroom settings. In particular, constructivism was seen as an example of educational reform and a departure from the positivist program in the teaching of science and mathematics (Cobb, 1994; Driver, Asoko, Leach, Scott, & Mortimer, 1994; Gordon, 2009; Hamilton et al., 2003; Hickey, Moore, & Pellegrino, 2001).

Additionally, constructivism as a theory of learning in other domains such as language arts and the social sciences has been validated by empirical work (Gordon, 2009; Guthrie, Wigfield, & VonSecker, 2000). In a recent study, Nie and Lau (2010) investigated how constructivist and didactic instruction were related to students' cognitive, motivational, and achievement outcomes. These authors defined constructivism as an instructional approach that emphasized a deep understanding of knowledge, provided for substantive communication during the learning process, and focused on making connections between new knowledge and real-life situations. Didactic instruction was depicted as a teacher-centered, knowledge-transmission approach to teaching focusing on the student passively receiving new knowledge that was supported with drill and practice. After controlling for prior achievement, Nie and Lau found that constructivist teaching was a significant and positive predictor of student achievement, higher level thinking strategies, self-efficacy, and motivation to learn. Their findings were consistent with empirical work by others providing support for constructivism as a

theory of learning in the classroom (Applebee, Langer, Nystrand, & Gamoran, 2003; Guthrie et al., 2004).

These findings about the effectiveness of constructivism when applied to classroom instruction have led to calls by some scholars to apply a constructivist theory of learning to teacher preparation and PD programs (Chicoine, 2004; Oxford, 1997; Powell & Kalina, 2009; Van Huizen, Van Oers, & Wubbels, 2005). Van Huizen et al. (2005) proposed that a teacher education environment based on the Vygotskian theory of constructivism offered opportunities for teachers to develop and assign value, commitment, and allegiance to teaching as a part of their professional identity development. Chicoine (2004) advocated for teacher education programs to model the kinds of pedagogical practices that are advantageous to the school reform efforts calling for active, deep, and ongoing learning. Similarly, constructivism as a theory of learning for the continuing PD of principals can provide a way for principals to assimilate and accommodate new knowledge into previous understandings about leadership through reflection, discourse, collaboration, and social interactions with colleagues.

Additionally, principals' acquisition and application of new knowledge provided an example of personal PD as change over time where the direction of that change was intended to be positive and prone toward school improvement. According to Merriam (2004), the intersection of learning and positive development was an example of Mezirow's (2000) transformational learning theory. Transformational learning theory incorporated the individual aspect of learning because it recognized that one's experiences, particularly one that was disorienting, resulted in individual reflections

about that experience while trying to understand it. Importantly, transformational leadership is unique to adult learning because it requires the learner to critically reflect and engage in rational discourse. These two activities are characteristic of higher levels of cognitive functioning. Transformational learning theory, which also is part of the conceptual framework of Daley's (2000) model, will be explored further next.

**Transformational Learning Theory**

Transformational learning is a cognitive process in which perspectives change as a result of personal reflection and dialogue with others (Mezirow, 2000). In this way, transformational learning brought together the individual and social construction of meaning through reflective practice and communities of practice. These concepts have been found in both CPE and human resource development (Ferry & Ross-Gordon, 1998; Stamps, 1997).

Mezirow's (2000) perspective on learning focused on the individual, specifically how adults constructed meaning from life experiences. Mezirow defined learning as a process that involved using a prior understanding to construct a new or revised meaning, or understanding, of an experience. That new or revised meaning structure then guided future behaviors and actions. Mezirow suggested that different types of meaning structures exist. These meaning structures are frame of reference, habits of mind, and points of view. One's frame of reference is an acquired body of experiences that becomes the structures through which future experiences are understood. A habit of mind is a predisposition that acts as a filter for interpreting the meaning of a new experience. A point of view is the sets of beliefs, feelings, attitudes, and judgments associated with that

particular habit of mind. For example, believing one's group is superior to another is an example of a habit of mind. The specific beliefs that one has about groups of people outside one's own group are the points of view (Mezirow, 1997).

Transformative learning takes place when there is a change in a person's point of view (beliefs or attitudes) or an alteration of an entire habit of mind. Transformative learning is the process by which those assumptions and expectations individuals have, which serve as a frame of reference to filter all experiences through, are changed. The result is that one's frames of reference become more inclusive, more open, and more capable of change and therefore one's beliefs and opinions (points of view) become more accurate guides to one's behaviors (Mezirow, 2000).

Mezirow's (1991) transformative learning theory is made up of four main components: (a) the experience itself, (b) self-examinations and critical reflections, (c) reflective discourse, and (d) individual action. Mezirow proposed that the transformative learning process most often begins as a result of a life experience that presents a disorienting dilemma. This dilemma cannot be solved by employing the usual problem-solving strategies. This leads the individual to begin some self-examinations and critical reflections. While many learning theories acknowledged the critical role played by reflection, Mezirow (2000) differentiated reflection into three types: content, process, and premise. It is Mezirow's differentiation of reflection which sets transformational learning theory apart as a unique theory of adult learning. Content reflection involves thinking about the experience. Process reflection involves thanking about how to handle the experience. Premise reflection, which Mezirow contends is the only type of reflection

that leads to transformative learning, involves examining long held socially constructed assumption, beliefs, and values about the experience (Merriam, 2004).

Following self-examinations and self-reflections is reflective discourse, the social component of transformational learning theory. Reflective discourse involves seeking out different opinions and trying out a new understanding on others as a way to assess or justify the new interpretation. Reflective discourse is a way to gain a clearer understanding of new knowledge by talking with others. Discourse can occur in many ways including one-to-one conversations, group conversations, and in formal educational settings. The final component of transformative learning is action (Mezirow, 1995; Mezirow, 2000). The professionals Daley (2001) studied, including nurses, lawyers, and social workers, told how an event happened in practice that forced them to reflect on their prior learning and actions and then change their practices based on new understandings. Because the focus of this dissertation was to study the learning processes of principals in PD activities and their actions back at their schools Mezirow's (1991, 1998, 2000) transformational learning theory was useful in examining the meaning-making process undertaken by principals participating in PD activities. Recent research related to transformational learning theory has led to the expansion of Mezirow's theory in ways that may illustrate how principals apply PD in practice.

A review of the research related to transformational learning by Taylor (1997, 2000) revealed that, transformational learning appears to be more fluid and recursive than originally presented. Also, transformational learning is a complex process involving feelings as well as thoughts. The disorienting dilemma which was believed to set in

motion reflection that might lead to transformational learning may instead be an accumulation of events which come together to begin the critical process of premise reflection. Relationships have also been found to be important in transformational learning. Relationships built on trust facilitate the social component of transformational learning, reflective discourse. Personal contextual factors such as readiness for change have also been found to predispose individuals to a transformational learning experience (Baumgartner, 2001).

In 2007 and 2008, Taylor again conducted an extensive review of the research related to transformational learning theory. He found much of the research concerned fostering transformational learning by examining the nature of critical reflection, relationships, and the role of context. Taylor (2007) found support for learning experiences that are direct, personally engaging, and stimulates reflection about experiences. Taylor (2008) also found support for Merriam's (2004) assertion that the critical reflection and rational discourse needed for transformational learning requires mature cognitive development. This finding suggested that becoming reflective is a growth process that requires time and practice. Several studies found the context of the learner shaped the transformational learning experience. One study in particular illustrated how the effects of power presented interpersonal and socio-cultural challenges to individuals following transformational learning experiences. In conclusion, Taylor found that transformational learning theory, supported by empirical research, had important implications for the practice of teaching adults.

## Daley's Model of Learning in Continuing Professional Education

The roles of constructivist learning theory and transformational learning theory in adult learning have been explored by many scholars (Merriam et al., 2007). Daley's (2000) work expanded the work of other scholars of adult learning (Broad & Newstrom, 1992; Cervero, 1988; Rogers, 1995) by linking context and professional practice to knowledge development. Daley (2000) proposed that knowledge developed through constructivist and transformational learning was immediately amended in the context of the professional's practice. Her model, presented in Figure 2, provided an understanding about the complex interrelationships among knowledge, context, and professional practice. Daley's model of CPE was used to frame the research in the prior study and also has informed the present study. A review of Daley's work leading to the development of her model and subsequent work designed to test and validate her model is presented next.

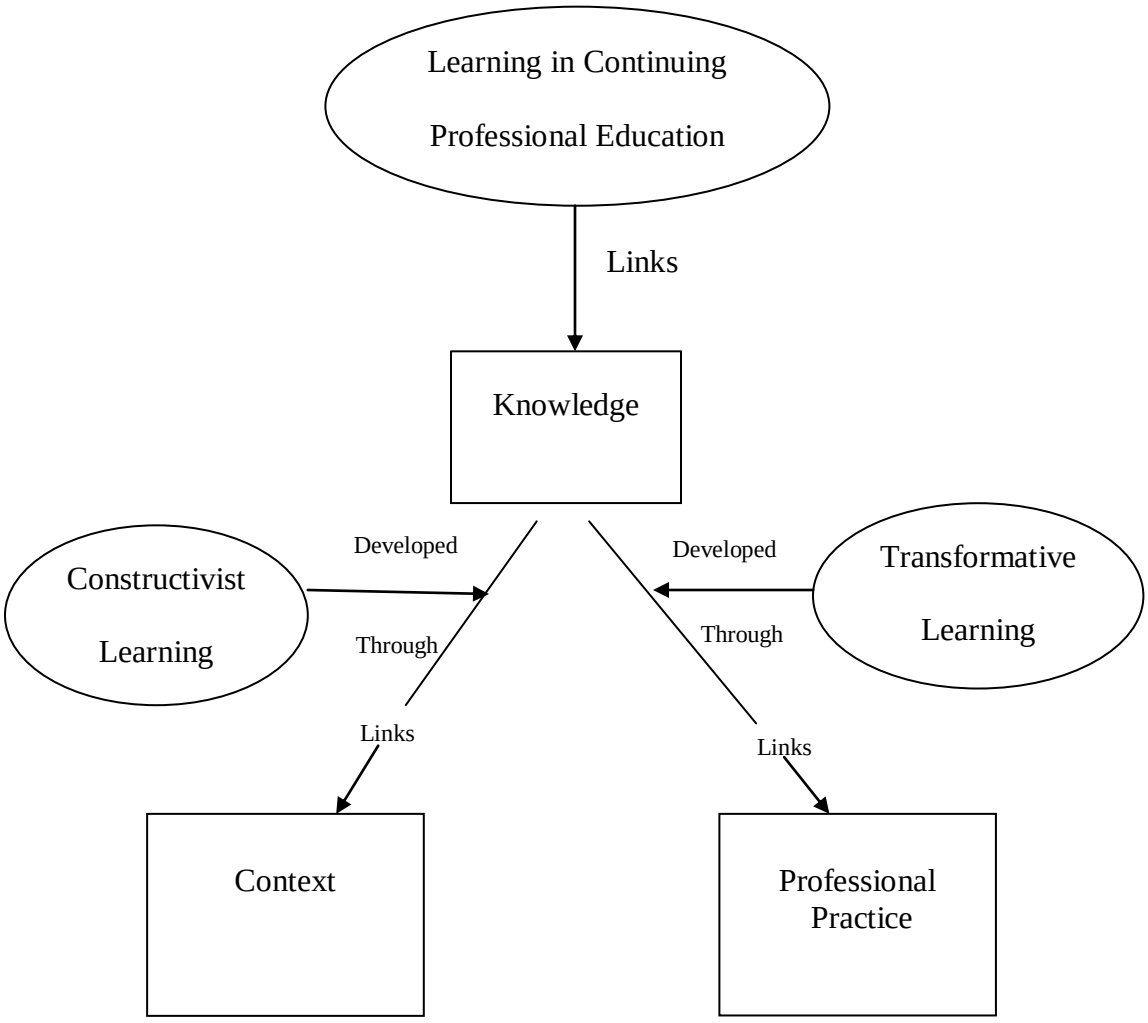


*Figure 2*. Daley's (2000) model of learning in continuing professional education.

Daley's (2000) model emerged from a study of nurses (Daley, 1997, 1999) in which she explored how professionals' learning changed as they gained more experience. In her study of the different learning processes of novice and experienced nurses, Daley (1999) found evidence of constructivist learning by experienced nurses. The experienced nurses in Daley's study reflected on past experiences, thought about new knowledge,

considered their context, and then made use of that new knowledge in their practice. For these nurses, formal learning opportunities served as background material. They assimilated new learning with past experiences and also differentiated those experiences from the new information. One of the nurses in Daley's (1997) study likened the process of assimilating new learning to creating a mosaic. She explained she put the pieces of what she learned from many places together until she had her own picture of her job. Learning also took place for the experienced nurses through a process of sharing knowledge and experiences with other nurses.

For example, a nurse indicated to Daley (1999) that some of her best learning happened when she asked another nurse about a situation she was experiencing and found that nurse had experienced something similar. The nurse reported the exchange of ideas was beneficial and valuable to her. Thus, for experienced nurses, Daley found that learning is grounded in the needs of their clients and the context of their practice. Consequently, these experienced nurses provided an example of a constructivist framework for learning as they created meaning from new knowledge by linking the new information with past experiences through reflection or dialogue with others. Like these veteran nurses, practicing principals have a repertoire of past experiences and their own context in which to apply new knowledge. Also like the nurses Daley studied, principals have reported that time away from their schools for their PD and working with colleagues during that time is a valuable experience (Houle, 2006; Schroeder & Madsen, 2011).

Like the nurse who shared with Daley (1999) her experience of learning by asking another nurse about her experiences, many of the nurses Daley (1997, 1999) studied

indicated their learning experiences occurred in the context of practice instead of a PD session. Thus, Daley also acknowledged that learning while in practice is informed by situated cognition theory. Situated cognition theory specifies four interrelated features of learning and two of these features are shared by social cognitive learning theory and constructivist learning theory. These features are that learning is a social phenomenon and learning relies on prior knowledge. Additionally, situated cognition theory proposes that new learning must be practiced using authentic tools and in a context like the work environment if new learning is to transfer. As those scholars who researched PD for principals noted, authentic problem-solving experiences and job-embedded PD are characteristics of exemplary PD programs but not necessarily found in all the many and varied opportunities for principals' PD (e.g., Kelley & Shaw, 2009; Peterson & Kelley, 2002).

Drawing on Mezirow's (1991) work, Daley (2000) found a connection between the reflective process described by experienced nurses and transformational learning theory. Through the reflective process, these nurses used new knowledge and experiences to change previous assumptions or construct new beliefs. Daley (2001) reported how professionals she studied acquired information and then changed their views about certain aspects of their jobs. One professional reported how her assumptions about effective communication changed, and another reported how her understanding of resistance was changed.

The nurse who shared her experience of transformative learning related to communication had realized that her view of communication was not accurate in her

practice. She had learned in from coursework that communication was about verbal skills when assessing patients and providing treatment. However, her understanding of communication skills was amended in her practice when she learned that communication was about being present for the patient, showing caring, giving time to the patient, not just using the right words. A social worker explained she no longer viewed some of her clients as resistant to change, but rather had learned that sometimes it was the system thwarting their need to change and so she became more of an advocate for her clients at the system level (Daley, 2001). The reflective practice these experienced professionals engaged in as a result of PD activities also facilitated meaning making with newly acquired knowledge. Recent recommendations for principal leadership programs included opportunities for reflection, critical analysis, and attention to issues of diversity in race, ethnicity and gender (Davis et al., 2005), which provide prospects for transformational learning.

Daley's (1997, 1999, 2001) findings supporting evidence of constructivist and transformational learning theories in adult learning were noteworthy. However, it was the influences of the particular professional practice and the context of practice that shaped how professionals used knowledge from CPE experiences that set her work apart from others at that time (Daley, 2000). Findings from Daley's work about the influence of context on CPE are discussed next.

In a study in 2001, Daley explored how learning becomes meaningful in practice in four professions. Daley interviewed social workers, lawyers, adult educators, and nurses within 2 years after their attendance at CPE programs relevant to their professions.

Daley reported that a major finding from this work was the connection of CPE to the nature of the professional work. She suggested this finding had implications for the developers and providers of CPE. For the professionals Daley studied, each had a unique view of their work. The way the professionals viewed their work influenced how they made sense of the new knowledge presented.

Another finding from Daley's (2001) work with various professionals was the process by which new knowledge was made meaningful. Professionals reported that their experiences using new knowledge in their context of practice often caused them to change their ideas about topics presented in CPE programs. Thus, meaning making from new knowledge was facilitated by acting on the new knowledge, thinking about it through reflections in action, and identifying their feelings about the new knowledge. Therefore, Daley concluded that applying new knowledge in practice is a recursive and ongoing process. Her conclusion suggested that, in contrast to the intent of many CPE programs, transfer of learning is not a simple linear process of transmitting information to practitioners.

Another finding from Daley's (2001) study was the value of PD as an affirming experience for all four professional groups. Professionals reported affirmations confirming their knowledge as well as their commitment to their profession. Social workers found value in being able to step away from the day-to-day tasks to refresh their minds and spirits. One adult educator commented that even if she did not necessarily learn new things, PD experiences reinforced what she was doing. For others, PD that affirmed their knowledge and practice gave the professionals more confidence in their

work. For all professionals an important outcome of PD was that they returned to their work with renewed commitment, enthusiasm, and energy in addition to new knowledge.

Daley (2004) also found support for her model of CPE in a study of teachers (Daley, 2000). This study included teachers from elementary, middle, and high school who, in the prior year, had attended a university-sponsored PD program. These teachers reported the continually changing nature of their knowledge based on PD, experiences, and conversations with colleagues. Interviews with teachers revealed that they not only think about the new information, but also were aware of feelings associated with the PD experience. These feelings included being refreshed, having increased confidence to try new things, increased creative thinking, and having their prior knowledge affirmed. In addition to these cognitive and affective processes, teachers also reported taking action on their new learning. However, like the other professionals, the teachers did not purely apply the new learning in their practice. Instead, they modified that new learning to fit their own situation. In other words, according to Daley (2000), making new knowledge meaningful involves the processes of thinking, feeling, and then acting within the context of the practice.

These thoughts and actions shared by these professionals in these studies (Daley, 2001, 2004) are consistent with constructivist and transformational learning theories on which Daley based her model (Daley, 2000). Although each of the professions may have reported a slightly different way of transferring new knowledge into their practice, the differences appear to be due to differences in the context of their practice. Daley (2000) proposed that the context of practice influences how each individual uses the new

learning. She asserts that the relationship of context to practice is especially important given the fact that professionals do not operate as autonomous workers, but rather work within a larger organizational system. Within each organization is a culture particular to that context. It is the understanding of the context of practice that Halverson (2004) suggested is the vital knowledge successful school leaders use to integrate general knowledge and theory gained from PD into their practice.

Halverson's (2004) conceptualization of phronesis, practical wisdom, for school leaders was used to frame the research in the prior study and also has informed the present study. Halverson provided insights into the ways in which school leaders think about their context as they considered incorporating new knowledge into their practice. His work provided an elaboration of the link between knowledge development and context and professional practice put forth by Daley (2000). In particular, he suggested that the process by which school leaders apply new knowledge to the particularities of their specific context represents an important area of leadership knowledge. While acknowledging that types of knowledge such as those associated with policy, programs, and research are important for school leaders to possess, Halverson asserted it is the knowledge of how and when to apply that general knowledge to the uniqueness of the leader's context that is crucial. Halverson's work brings to the forefront, as Daley (2000) does in her model of learning, the importance of context in the quest to understand how principals integrate knowledge from continuing PD experiences with their practice. Halverson's conceptualization of phronesis for school leaders is elaborated next and situated in an overview of the concept of phronesis.

## Halverson's Concept of Phronesis for School Leadership

Halverson (2004) suggested that the primary work of school leaders is to determine how to improve student learning amid the particular contextual details of their schools. The awareness of the contextual details is used by successful school leaders to make decisions about staffing, the needs of students, and policy implementation. Halverson asserted the ways successful principals recognize and solve problems with consideration of the context of their school represents their professional expertise. For Halverson, taking action on learning required making sense of new knowledge using phronesis and an awareness of the contextual supports or constraints, prior to integrating new knowledge into practice. The present study explored principals' use of their phronesis as they thought about applying their PD learning amid a consideration of the contextual supports and constraints in their context.

Halverson (2004) also described phronesis as a moral form of knowledge when principals' reflections on new knowledge resulted in changes in points of view or beliefs. Additionally, Halverson viewed this moral knowledge as something individuals develop over time. Over time successful principals become skillful in identifying certain kinds of situations worthy of action and can develop action plans to address those situations. Like other scholars (e.g., Leithwood & Steinbach, 1992), Halverson proposed that skillfulness in problem naming and problem solving distinguished successful principals from others.

Halverson's (2004) position was that phronesis guides problem naming and problem solving through the integration of several processes. These processes are the assimilation of new knowledge with previous perceptions, judgment, choice, planning,

and action all of which are continuous and recursive in nature. The process of assimilation mirrors the process of constructivism. In addition, the processes of judgment and choice represent a characteristic of transformative learning, namely the opportunity to change assumptions, beliefs, and practices. Halverson believed that successful school leaders used practical wisdom to fit their technical and theoretical knowledge gained from PD into the context of their practice. Thus, practical wisdom served as a bridge between the knowledge provided to principals by policy makers, program designers, professional organizations, and educational researchers and the everyday practice of principals in their school context.

The importance of phronesis for school leadership is further substantiated considering that schools do not exist in a vacuum. Despite being characterized as loosely-coupled organizations, schools' existing situational and cultural constraints must be addressed in order for school improvement efforts to achieve intended results (Halverson, 2004). Phronesis moves successful leaders beyond an understanding of "what to do" to an understanding of "what is needed" coupled with an ability to take appropriate action to get the work done (Halverson, 2004, p. 2). It is the importance of understanding the particular context of practice that differentiates phronesis from tacit knowledge.

Tacit knowledge is a type of knowledge acquired from experience. It represents a certain "know-how" that is developed and internalized over time (Eraut, 2004; Polanyi, 1966). Tacit knowledge is procedural in nature, important for problem-solving and goal attainment, and acquired without assistance from others (Nestor-Baker & Hoy, 2001). Phronesis is a specialized form of knowledge and different from tactic knowledge.

Phronesis becomes a form of moral knowledge, called the phronetic eye by Aristotle (1941), used by leaders to recognize situations worthy of action for the good of their particular community. Leaders used their phronesis to develop an appropriate course of action after considering the particulars of their context. In other words, a school leader uses phronetic knowledge to implement school improvement programs and policies by understanding and negotiating the existing context of the school including its cultural, its accommodations, and its constraints (Halverson, 2004).

**The Role of Phronesis in the Behavioral Sciences**

Practical knowledge was first espoused by Aristotle (1941) as one of three intellectual qualities that, in conjunction with the possession of moral virtues, would enable one to achieve well-being. The first intellectual virtue is *episteme*, or scientific knowledge. Aristotle considered scientific knowledge to be knowledge that is true and certain about things that are universal. The second intellectual quality is *techne*, sometimes called craft knowledge. Techne is the knowledge about how to make things and is often expressed through routines and procedures (Halverson, 2004). The third intellectual quality and the one Aristotle conceived as the highest intellectual virtue, is phronesis, practical wisdom. Those who had phronesis according to Aristotle had knowledge about what is good for themselves and for people in general as well as the ability to apply that knowledge to the particular situation. While scientific and craft knowledge are useful, they are insufficient tools in practical matters for three reasons: (a) practical matters are changeable over time, (b) practical matters are subject to perceptions

and interpretations by the individual in the situation, and (c) a situation may contain a particular element that has not occurred previously (Nussbaum, 1990).

Therefore, individuals make decisions as part of everyday life not based solely on scientific or craft knowledge, but also by using their phronesis, or practical knowledge, of the situation (MacIntyre, 1999). Halverson (2004) believed that it is this practical knowledge that principals needed to incorporate knowledge received from educational researchers, policymakers, and program designers. The three components associated with practical wisdom are (a) moral perception, (b) deliberation, and (c) reasoned choice (Fowers, 2003) and are further discussed below.

**Phronesis as moral perception.** Moral perception requires knowing how to interpret the situation by describing and classifying it. Sherman (1989) suggested that circumstances faced by practitioner do not come pre-labeled as a particular situation; instead, the situation must be sorted out by the practitioner. This assertion supports the importance of reflection in action (Schon, 1983) and expertise in problem naming skills (Leithwood & Steinbach, 1992). Practical wisdom is composed of a moral sensibility of what is at stake in the given situation compared to the goals that are in place. The affective aspects of our understandings of a situation are a part of acting well and with virtue. It is affective thinking that compels one to do what is good rather than being pushed to act out of duty or obligation (Fowers, 2003). Moral perception in decision making by principals helps school leaders determine which action is worth taking in a particular situation (Halverson, 2004). Halverson found the metaphor of a phronetic eye used by Aristotle (1941) applicable to school leaders. Aristotle used this metaphor to

explain how individuals, over time, develop the capacity to recognize situations as worthy of action and then are able to develop an appropriate course of action for the good of the community. Furthermore, he suggested that it is a leader's values that determine what kinds of problems merit their attention and their efforts to solve those problems. According to Halverson (2004), a phronesis-based perspective on school leadership gives attention to the moral perceptions which result in patterns of values expressed in day-to-day actions by the principal.

**Phronesis as deliberation.** The second component associated with phronesis is deliberation. Sometimes moral perception does not provide a clear course of action. The complexities of a given situation make a linear path between the situation and the goals unlikely. When the most appropriate course of action is not apparent, deliberation is required (Fowers, 2003). The purpose of deliberation is to lead to a specification of the end goal in light of what is realistic and attainable. In the exercise of practical wisdom, deliberation involves two tasks. First, the process of deliberating about how to reach a goal begins with deciding what will count as the end goal in the present situation. Second, deliberating requires the coordination of multiple goals, and possibly competing goals, that generally exist in a given context. Thus, deliberation requires considering how to best pursue a particular goal in such a way as to be complimentary to all other goals (Fowers, 2003; Nussbaum, 1986; Wiggins, 1980). Certainly, this challenge is obvious to principals who must prepare students for a future that calls for innovation and flexibility in its workers while they strive to meet the mandates of NCLB (2001), which call for conformity and standardization.

For Halverson (2004) the component of deliberating as a part of phronesis was expressed in individuals' abilities to frame and solve problems. Halverson noted the cognitive aspects of phronesis are related to the concepts of problem setting in current expertise research. He asserted that phronesis is a required prerequisite for the application of expert problem-solving mental models or schema; however, he cautioned that phronesis cannot be reduced to a set of rules followed by experts. Instead, the ability to frame problems is developed by experiences and stored as a form of moral knowledge. Although it may be tempting to express this moral knowledge as a pattern of behavior, Halverson cautioned that the particulars of the next situation will always require adaptation of behaviors to the situation at hand. This ability to assess new situations which cannot be specified in advance by a rule-based system leads to the third component of phronesis, reasoned choice.

**Phronesis as reasoned choice.** Deliberations lead to making choices about the action most suitable to the situation. Reasoned choice means selecting from several alternative action plans after deliberating about what is better and worse. Aristotle (1941) used the term *prohairesis* in explaining reasoned choice. Fowers (2003) noted that *prohairesis* translated means "choosing over" or "choosing before" (p. 421). Reasoned choice seeks to harmonize the multiple and competing goals that exist in a situation with what is possible. In making a reasoned choice, one makes a synchronized evaluation of what is desirable and what is feasible (Sherman, 1989). However, sometimes it may not be possible to harmonize competing goals. In this case reasoned choice involves choosing the course of action that best fulfills the most important goals (Fowers, 2003).

Halverson (2004) noted that skillful performers know when the rules of a typical performance apply, which of those rules to select, and which rules need to be discarded or reformed given the particulars of the circumstance. The school leader who exercises practical wisdom understands which aspects of the mental models or schema apply and when to apply them. Much of Aristotle's (1941) discussion of phronesis was described as individuals pursuing personal goals. He also noted that phronesis in individuals was seen as a pursuit of good for the community also. Halverson explained that with political phronesis leaders pursue good for the sake of those they lead. Thus, leaders must balance their own personal good with the good of their community. However, Halverson stated that this did not imply there must be a trade-off between personal and political phronesis; rather, it is the personal values and commitment of school leaders that shape their actions taken for the good of their school community. Halverson gave as an example of this balance between personal and political phronesis the process of hiring of new teachers. In this process a principal must balance his or her instincts about what makes for an effective teacher with the viewpoints of members of the school community. This example provided by Halverson might also be explained as the process of making a reasoned choice.

**Phronesis in other professions.** Likewise, other scholars have suggested that by studying phronesis, understandings of the behavioral sciences can be enhanced and clinical practices improved. Accordingly, the problem inherent in any theory or framework provided by social science research is in knowing how to apply that theory or framework appropriately to the specific situations encountered in practice (Fowers,

2003). Some have suggested that formal knowledge, often recognized as a set of rules, which emerges from social scientists investigations are of limited use to practitioners (Fowers, 2003; Tsoukas & Cummings, 1997). In particular, scholars have suggested that phronesis has a place in fields such as organizational and management research and in research on teaching and teacher education. These scholars assert that competence in action is more than just the application of formal rules, referred to as "if, then" statements. Competence in action involves the use of practical wisdom to bridge the gap between theory and practice (e.g., Eisner, 2002; Kessels & Korthagen, 1996; Statler, Roos, & Victor, 2007; Tsoukas & Cummings, 1997).

Support for the importance of practical wisdom was found in organizational and management research. Organizations are no longer viewed as machines where regularity, predictability, order, and efficiency are the desired features (Taylor, 1911). In contrast to the scientific management principles that dominated organizations and management theories for so long, organizations are now understood as having cultures and political features. This new thinking about management and organizational development represented a return to the Aristotelian themes that were marginalized by the rise of scientific rationalism (Tsoukas & Cummings, 1997).

Effective strategic leadership necessitated having the best available scientific knowledge and being empowered as an individual to respond adaptively to changing conditions. Effective strategic leadership required practical wisdom to make decisions and take actions that served the good of the organization even in the most ambiguous, uncertain situations. Strategy planning included a careful analysis of the situation and its

resources because there can be no guarantee that the general rules of strategy that applied in the past will apply in the present (Nonaka & Toyama, 2007; Statler et al., 2007).

In addition, by rethinking strategy processes, organizations created occasions to develop human capacity for practical wisdom. As collective phronesis developed in an organization, shared practices emerged through which problems were detected, sorted out, and solved. It was this collective organizational phronesis that helped organizations become resilient, able to deal proactively with changes, and still achieve the idealistic vision of a common good both for the organization and the larger community where it resides (Nonaka & Toyama, 2007; Statler et al., 2007). Echoing Halverson (2004), who saw phronesis as the bridge between policies, programs, research and everyday practice, researchers in the field of organization management (e.g., Nonaka & Toyama, 2007) suggested phronetic leaders are able to synthesize contextual knowledge gained from experiences with universal, rational, knowledge gained through training.

Similarly, some scholars in the field of education have advocated a shift from an emphasis in teacher education on the scientific and abstract knowledge that is often known as theory to an equal emphasis on knowledge as phronesis, practical wisdom. This knowledge would be concerned with understanding specific, concrete cases and ambiguous and complex situations (Kessels & Korthagen, 1996). Using the example of a scenario from a meeting of a group of student teachers, Kessels and Korthagen illustrated the limitations of relying only on episteme, knowledge that is scientifically based, general, and abstract. When an individual shared with the group that he was having difficulty relating to individual students, the teacher asked the other students to give

advice. After listening to the advice offered, the student's reaction was that he had heard all this advice before and it did not apply in his situation. Kessels and Korthagen proposed that instead of directing the discussion to other the other students, the teacher educator should have probed further with the student to determine what he was aware of, what details he saw, and what his thoughts, feelings, and reactions to the situation were. By asking the student teacher to examine the particulars of his own experience, the teacher educator would be helping him to develop phronesis. When knowledge is understood as practical wisdom, the focus shifts from applying abstract rules to understanding the particulars of the situation.

While theoretical knowledge is a useful tool for asking questions, by itself it is insufficient in order to be an effective teacher. To be successful the student teacher must develop phronesis, practical knowledge. However, the practical wisdom of expert teachers and teacher educators cannot be written in a paper for student teachers to read. Instead, Kessels and Korthagen (1996) advocated that the role of teacher educators is to help the student teacher explore his or her own perceptions, to systematically reflect on experiences, to offer his or her own insights on the particulars of a situation, and to deliberate with guidance from the teacher educator on the best course of action to achieve the desired goal. Phronesis explained why successful teachers understand why students do not work to their full potential, or cause trouble in class. By becoming aware of and articulating their own practical knowledge, teachers developed a greater understanding of their response to a particular situation which adds to their own professional growth (Noel, 1999).

Halverson (2004) offered that for principals, phronesis served as a type of executive function to help leaders determine which techniques and theories are appropriate to use in a given situation and to illustrate what the significant consequences of leaders' actions are. Halverson suggested that this executive function resulted from habitual action and was personified in the character of the leader. Aristotle's (1941) explanation of how individuals developed a phronetic eye (the capacity to recognize situations as worthy of action and the ability to develop an appropriate course of action) represents the process of professional growth in which principals are engaged. Like those scholars (e.g., Kessels & Korthagen, 1996; Statler et al., 2007) who advocated the inclusion of phronesis as a form of knowledge development in other arenas, Halverson argued for the use of phronetic narratives as a resource to guide the learning of school leaders. He explained that phronetic narratives can help to document and communicate how successful school leaders managed the complexities of their particular situations while pulling together knowledge from policy makers, program designers, professional organizations, and researchers to manage change and implement new practices.

**Conceptual Tools Applied to This Study**

The conceptual framework for this dissertation comes from prior research findings that emerged from the School Leadership Improvement Study (SLIS). The prior research findings were used in the development of research questions, the collection of data, and the analysis and interpretation of the data. This dissertation built on findings from the School Leadership Improvement Study (SLIS) by probing further how principals acquire and contextualize new knowledge gained from PD experiences and

what aspects of the learning, if any, are applied in practice. The findings from this dissertation were used to test, validate, and refine the prior research model which emerged from prior SLIS research (Schroeder & Madsen, 2011).

Additionally, the conceptual frameworks used in the prior research, Daley's (2000) model of CPE and Halverson's (2004) concept of the phronesis for school leaders, were used as tools to analyze findings from the present study. Findings that emerged from the present study also led to the inclusion of Weick's (1995) theory of sensemaking in organizations in the data analysis and interpretation. In summary, the conceptual tools used to inform the understanding of how principals use their PD experiences to inform and influence their leadership practices were (a) the prior SLIS research model, (b) Daley's (2000) model of CPE, (c) Halverson's (2004) concept of phronesis for school leaders, and (d) Weick's (1995) theory of sensemaking. A brief overview of the theory of sensemaking is provided here with much more detail included in Chapter 4 as that theory is related to principals' processing of new knowledge from PD experiences.

Weick (1995) presented his theory of sensemaking as a developing set of ideas to explain peoples' responses to events that are so extreme they seem unbelievable. Occurrences of sensemaking were associated with (a) information load, (b) turbulence, or (c) problems. Information load is a combination of a large amount of varied and ambiguous information. Turbulence refers to frequent and random changes causing instability in the environment. Problems are represented by a gap between what is taking place in the environment and what the people in that setting desire to take place.

The process of sensemaking has been studied in organizations that have experienced a crisis and in organizations during a period of change (Maitlis & Sonsenshein, 2010; Weick, 1995). In either case, people attempted to put stimuli from their environment into a framework to comprehend and explain events that were discrepant from their expectations or predictions (Louis, 1980). The study of occasions for sensemaking in organizations is tied to problem setting and problem solving during times of confusing information or rapid change.

For example, the schools in the present study, like schools across the country have been inundated with changes continuously for the past several years. Principals have faced changes in curriculum, assessment, instructional arrangements for students, expectations and evaluations of themselves and their teachers, as well as the financial consequences of a struggling economy. Responding to these challenges has required principals to engage in frequent, daily problem solving as a major component of their professional work. Drawing on the work of Schon (1983), Weick (1995) proposed that practitioners must first construct the problems to be solved from the situations that are unclear or disconcerting. Problem setting is a cognitive process that precedes the actual problem solving action. Weick identified seven components of the process of sensemaking. He found sensemaking to be grounded in individuals' identities, to be a retrospective process, and to be ongoing. According to Weick, when individuals engaged in sensemaking they were constructing what they believed was their reality based on the cues they attended to and extracted from their environment. Sensemaking was guided by what individuals believed to be plausible or reasonable, often based on past experiences.

Finally, Weick cautioned that while sensemaking may appear to be an individual activity, it never is. Sensemaking was always contingent on the actions of others in the environment. Those actions included talk, symbols, procedures, or expectations.

Weick's (1995) study of sensemaking in organizations focused on the way people coped with unsettling situations by analyzing the processes by which they named their problems and the actions they took to bring order back to their setting. These settings included chemical plant disasters, wild land fires, and medical crises (Weick, 2009). Weick (1995) drew parallels between his work in these areas and the work of school administrators. In particular, Weick (1993) noted parallels between the way management teams in education were organized and the organization of the Mann Gulch firefighters. Based on these parallels, Weick offered sources of vulnerability and sources of resilience and success pertinent to the work of education administrators. In the present study, evidence of principals' efforts to make sense of tensions between PD learning and cues in their environment emerged, suggesting that principals' contextualization of new knowledge is a process of sensemaking. As the process of sensemaking by principals led them to take action on their new knowledge, findings suggested that principals' phronesis as described by Halverson (2004) guided their actions.

## Summary

In this chapter, literature related to PD for principals was reviewed and the conceptual framework for the present study was presented. First, this study was grounded in the research related to principal leadership since the 1980s when effective schools research first highlighted the importance of the principal's role as the instructional leader.

The leadership models that emerged from scholarly research included instructional leadership, transformational leadership, an integrated model of leadership, and a return to a focus on instructional leadership. Scholars have continued to examine ways in which principals can build and leverage all available resources to improve student achievement. To this end, the continuing PD of principals has become increasingly important as a means to prepare principals to lead school improvement efforts. Next, this chapter provided a review of what is known about current PD opportunities for principals. As the contexts of principals' practice continues to change and measures of accountability increase, leadership skill development must be an ongoing process throughout the lifespan of a leader's career. In order to provide ongoing PD for principals it is essential to understand what kinds of PD facilitate the acquisition of new knowledge and how principals use new knowledge gained from their PD experiences.

Finally, to frame the present study's inquiry into the acquisition and application of new knowledge by principals, a prior research model of principal learning (Schroeder & Madsen, 2011) was presented as the conceptual framework. Additionally, two conceptualizations of adult learning upon which the prior research was grounded were included in the conceptual framework for the present study and presented in this chapter: (a) Daley's (2000) model of CPE, and (b) Halverson's (2004) interpretation of phronesis for school leaders. Based on findings that emerged from the present study, Weick's (1995) theory of sensemaking was also used as an analytical tool and included in the conceptual framework. Using these four conceptual tools, the researcher's intent for the present study was to test, validate, and refine the prior research model that offered insight

into how principals acquire, contextualize, and apply new knowledge in practice. The methodology employed to achieve the purpose of the present study is presented in the next chapter.

# CHAPTER III

# METHODOLOGY

This chapter explains the research methodology applied in the present study. The intent of the present study was to assess, validate, and refine, a prior research model of principals' thinking processes that mediate between the acquisition and application of new knowledge gained from professional development (PD). The prior research model was based on prior research conducted in the School Leadership Improvement Study (SLIS), an IES sponsored randomized control trial designed to test the treatment fidelity and school-level efficacy of the Mid-continent Research for Education and Learning (McREL), Balanced Leadership Professional Development program for principals.

As a consequence of findings on the importance of instructional leadership (Robinson et al., 2008), researchers and practitioners have questioned how to best design and conduct leadership preparation and on-going PD (Lumby et al., 2008). Given diminishing district and state resources, it is especially important that PD provided for principals achieve its intended outcomes. Despite the considerable dollars spent for PD, few studies have documented how principals apply the PD learning in their practice. Thus, there is strong reason to understand how principals acquire, contextualize, and apply knowledge and skills gained from PD (Firestone & Riehl, 2005; Lumby et al., 2008).

This study addressed this need by asking the following research questions:

1. How do principals process and contextualize their PD learning both in the PD context and once they return to their schools?
2. Do principals apply their PD learning in practice, and if so, how do they do that?
3. What aspects of PD learning experiences are most useful to principals and why?

A better understanding of how principals acquire and integrate new knowledge into every day practice may lead to a better understanding of how to deliver PD for principals.

The account of the research methodology used in the present study begins with an explanation of the research perspective and is followed by a description of the data sources and their context including the criteria for selection. Next, methods used in the data management, data collection, and data analysis are described. Finally, procedures used to establish the trustworthiness of the findings are presented.

This study extended prior qualitative research completed as part of a mixed methods project, the School Leadership Improvement Study (SLIS). The qualitative case study component of the SLIS answered questions about the ways in which a widely disseminated PD program for principals, McREL's Balanced Leadership Professional Development Program (BLPD), influenced principals' leadership initiatives and their efforts to improve student achievement. This study aimed to further that work by examining and refining the model of PD learning for principals which emerged from the SLIS study.

According to Yin (2009), case study research is an appropriate methodology for explaining the how or why of a social phenomenon. Case study research allows the researcher to explore the complete and in-depth details of a real-life experience. In summary, Yin offers that case study methodology has a distinct advantage when a how or why question is being asked about a contemporary set of events over which the investigator has little or no control. In the present study, the intent was to explain how principals acquire and process new knowledge and to examine how and why new knowledge is, or is not, applied in practice

Furthermore, a case study is an appropriate strategy of inquiry when the research involves the study of a phenomenon through one or more cases within a bounded system (Creswell, 2007, p. 73). According to Stake (1995), cases selected for study are part of a bounded system if (a) there are time and place boundaries to the cases, and (b) the cases have interrelated parts that form a whole. The phenomenon studied in this research is principals' acquisition and application of new knowledge from PD experiences. This cases selected for the present study were bounded by the principals' recent participation in a widely disseminated PD program over a 2-year period, where those principals practiced in a rural context within the same intermediate school district.

The focus of case study research on a particular phenomenon (being particularistic) is one special feature of case study research outlined by Merriam (1998). Being particularistic means the case study is important for what it reveals about a specific situation. In the present study, that situation, or phenomenon, represented the process by which principals acquire, contextualize, and apply new learning from their PD

experiences into their practice. Therefore, case study research provided an appropriate design for the present study because this researcher collected detailed information about principals learning processes over a period of time in the natural context of their practice.

A second characteristic of case study research is it provides a rich, thick description (Geertz, 1973) of the phenomenon being studied. A rich, thick description offers a deeper understanding and a more illustrative report of findings than numerical data alone can provide (Merriam, 1998). A rich, thick description portrays in detail the participants and the setting of the study. In the present study, principals' comments showing the complexities of acquiring and applying new knowledge were supported by information about that process in various ways and from different viewpoints such as observations from shadowing the principal and conversations with teachers. A thick, rich description enables readers to make decisions about the transferability of the findings from the present study to other settings based on similar characteristics of the settings (Creswell, 2007).

Finally, according to Merriam (1998) case studies are characterized as being heuristic because they shed light on one' understanding of the object of study in several ways. Case studies can reveal new understandings, broaden previous understandings, or substantiate what is known. This study conformed to the heuristic nature of case studies because this program of research examined a prior model and broadened the understanding of the way principals acquire, contextualize, and apply new learning from PD opportunities. To this end, the present study aimed to gain further insight into how

PD influences principals' practices aimed at school improvement by asking the following questions:

1. How do principals process and contextualize their learning experiences both in the PD session and once they return to their schools?
2. Do principals apply their PD learning experiences in practice, and if so, how do they do that?
3. What aspects of PD experiences are most useful to principals and why?

## Data Sources and Context

This qualitative case study employed a single case study design (Yin, 2009). The rationale for selecting a single case design was that it will provide a critical case for testing an emerging theory into practice model that represents how principals learn during PD and bring that learning into practice. Because this case study involved more than one unit of analysis, i.e., more than one principal, the research design was identified as a single case embedded design (Yin, 2009). Thus, five case study schools were purposefully selected from the larger, randomized SLIS research program of 42 treatment schools and 53 control schools (Creswell, 2007). A purposive sampling technique, snowball sampling, was used to select the sample that can provide the most information (Merriam, 1998). For snowball sampling, a principal from the SLIS case study was asked to refer the researcher to other principals who would provide rich information related to the research questions. The researcher sought to recruit three to five principals, since five cases are considered the maximum for case study research (Creswell, 2007).

The criteria used to select the case study schools were (a) the principal attended 90% or more of a 20-day, 2-year PD program, McREL's Balanced Leadership Professional Development program as a participant in the School Leadership Improvement Study (SLIS); (b) principals networked, formally and informally, with other principals in their district or ISD who also received the BLPD training; (c) the school was designated as rural by U.S. Census Bureau standards; and (d) the school was a relatively high poverty school. All five principals recruited by the researcher agreed to be a part of the study. Profiles for those principals are presented next followed by profiles of the principals' schools and districts.

**Participant Profiles**

Principals participating in the study had at least 2 years' experience as the principal at their current school, and a total of four to 18 years' experience as a school leader. Each principal's total experience in education encompassed from 20 to more than 30 years. Four principals are male and one is female**.** All principals hold a Master's degree required for the position of principal and all report having additional graduate school hours in educational leadership. Four principals performed additional responsibilities outside their duties as a school principal. One principal was the school district superintendent and director of transportation. Another oversaw the District School Improvement Plan and managed federally funded programs such as Title I. Another was the district Adult Education director responsible for supervising those classes that were offered in the evenings and on weekends. The principal of the fifth-sixth grade middle

school also was the district curriculum director for Grades kindergarten through 6. Appendix A provides a summary of the principals' profiles.

**District and School Profiles**

As a consequence of the selection process, all the case study schools were situated in rural or remote communities. All five schools belong to the same Intermediate School District (ISD). In this state, the ISD serves as an umbrella agency over several school districts and provides support services ranging from specialized programs for students to PD opportunities for teachers.

Three school districts were represented in the study. These three districts are located within a 25-mile radius of each other in a northern, rural area of a Midwest state. Three of the five schools belong to the same district. This district is in a town that had the largest manufacturing city in this region providing automotive-related products. The recent decline in the automotive industry impacted this town and surrounding communities with job layoffs and factory closures. Other industries in this area are agriculture and tourism; however, neither offered the employment and financial security previously provided by automotive manufacturing. After experiencing economic decline for several years, the area is seeing some manufacturing redevelopment in heavy equipment along with a slow return of the automotive industry. Appendix B provides a summary of the district profiles.

In addition to the impacts of a declining economy in this area, school districts have been faced with the implementation of two significant state legislated mandates. The first is the realignment of the state curriculum known as the Grade Level Content

Expectations (GLCES) to the national Common Core State Standards Initiative. This transition period from GLCES to Common Core requires that ongoing PD be designed by districts and ISDs and provided to principals and teachers at all grade levels in the major subject areas. At the time of the present study the Common Core Standards for Math were being implemented. Also, the state had legislated a new teacher evaluation system to be adopted by districts. This system included the following changes: (a) all teachers will now be evaluated every year as compared to every 3 years for non-probationary teachers in the past, (b) student performance measures must be included as part of teacher evaluations; although the exact measures had not yet been determined, and (c) no longer is there any distinction between tenured and non-tenured teachers when districts are faced with staffing cuts. Tenured teachers are no longer protected from layoffs which in recent years have had to occur often in these districts.

Given the economic downturns in this area it is not surprising that these schools are relatively small in size. Student enrollments in the case study schools varied from approximately 285 to 465 students. The percent of minority students was on average about 6%, although one principal reports that the population of Spanish-speaking families in the community is increasing each year. The percent of economically disadvantaged students, as defined by the free and reduced lunch guidelines, ranged from approximately 60% to 75%. Three schools served students in Grades kindergarten through 4; one school served students in Grades kindergarten through 5; and one school served students in Grades 5 and 6. Declining enrollments and budget constraints that resulted in an elementary school closure in one district led to the remaining elementary schools

downsizing to serve students through grade four only beginning with the start of the 2011-2012 school year. In this district, all fifth- and sixth-grade students were then moved to the previous middle school building, and the remaining students in Grades 7 through 12 were assigned to a junior high and a high school. A similar reconfiguration occurred in another district at the start of the 2010-2011 school year.

Staff sizes ranged from approximately 18 to 25. Due to the financial constraints experienced in these districts, para-professional staff positions were reduced drastically, counselor positions were eliminated, and ancillary staffs such as Music and Physical Education teachers are shared by two buildings in a district. In the words of one principal, they have learned to do more with less in the past few years. Assignments for teaching staff were also impacted at the two elementary schools and the fifth- and sixth-grade middle school at the start of the 2011-2012 school year because of the elementary school closure and district reconfiguration. Additionally, because NCLB law requires that all teachers be highly qualified, or certified in their assigned teaching area, many teachers were reassigned to teach different subjects or grades or assigned to different buildings at the start of the 2011-2012 school year.

Student performance on state-mandated annual assessments was impacted negatively by a major change for the 2011-2012 school year. The number of items answered correctly for a student to be considered proficient in a subject area was increased. Principals reported that the so-called “cut score” or the minimum score a student could achieve to be considered as passing the test was raised dramatically. As a result, the percent of children passing the Reading test at a case study school declined by

as much as almost 30 percentage points. In the Math, the outcomes were worse with passing rates dipping as low as 22% at a grade level, or dropping by as much as 60% in a school. A summary of the school profiles is presented in Appendix C.

## Research Instrument

### The Researcher's Positionality

In qualitative studies, the researcher is the primary tool for gathering and analyzing data (Marshall & Rossman, 2011; Merriam, 1998). In fact, successful qualitative work often depends on the researcher's interpersonal skills. Building relationships, establishing trust and rapport, being sensitive and intuitive, and having good communication skills are strategic and ethical considerations of qualitative work (Marshall & Rossman, 2011; Merriam, 1998). By using interpersonal skills effectively, qualitative researchers respond to opportunities to maximize the collection and presentation of meaningful information. By being sensitive and intuitive to the daily unexpected claims on a principal's time and attention, this researcher was able to build relationships with the principals based on trust and rapport. Being sensitive and intuitive also required this researcher to be a reflexive.

As the primary research tool, the researcher must think about one's role reflexively and subjectively. Reflexivity is a process of critical self-reflection. It is a self-inspection of one's biases and predispositions particularly important to address when the researcher is a part of the context, setting or phenomenon being studied (Schwandt, 2007). This researcher maintained a reflexive process throughout the study by making

notes in a journal following each school visit and throughout the data analysis process. This reflexive process also kept the focus of the work on the intent of the present study.

Being reflexive requires the researcher to acknowledge one's own subjectivity. Subjectivity is the researcher's internal understandings of the phenomenon. This researcher, as a former principal, had knowledge of the phenomenon being studied, continuing professional learning for principals. Also, this researcher had some experiences with the participants through the previous SLIS qualitative work. In these ways the researcher was considered an insider. However, this researcher was also an outsider in the sense of entering the participants' school lives for the first time in four of the five schools (Hays & Singh, 2012).

Nevertheless, as both an insider and an outsider this researcher must acknowledge and address the potential unintentional consequences of subjectivity (Marshall & Rossman, 2011). To do so this researcher utilized the following strategies: (a) member checking, (b) peer-review of interview protocols, (c) peer debriefing during the data collection and analysis processes, and (d) triangulation of data. These strategies are illustrated in more detail in the final section of this chapter.

**Development of the Interview Protocol**

The other research instrument used consisted of two interview protocols. The interviews were semi-structured to allow for reflections about the influence of the PD sessions on the principals' leadership initiatives aimed at improving student achievement that were particular to each school. The researcher developed the protocols based on a three step approach outlined by Seidman (2006). The first step established the

participant's context of practice. The second step focused on the details of the participant's lived experiences in PD opportunities. The third step encouraged participants to reflect on the meanings their experiences hold for them. When the interview protocols were initially developed, they were subjected to review and revisions by expert colleagues prior to their use as a data collection instrument. The initial protocols were also revised after the first school visits and submitted to IRB as part of an amendment process.

Initial questions were more structured in order to obtain some baseline contextual information about each school and its improvement initiatives. Other examples of questions asked in the first interview are the following: (a) Have any learning experiences in any PD sessions you have attended stood out as being among the best? (b) Have you used any of your learning from PD experiences in your practice? and (c) Why do you think learning experiences from PD become, or do not become, a part of a principal's practice?

In the second interview principals were asked to reflect on and elaborate on their responses to questions from the first interview as a form of member checking. Additionally, principals were asked to comment on responses from other principals in the previous SLIS work that suggested the consideration of contextual structures and politics as well as a concern for human relations influences the adoption of new learning from PD. Seeking to not only validate the model that emerged from the SLIS research, but also refine and add to that model, the researcher also asked principals the following: "When

you hear about new ideas in PD, what other thoughts go through your mind that influence whether or not you adopt new ideas?"

## Data Collection

Following receipt of IRB approval of this dissertation as exempt research, data collection began. Data collection for the present study consisted of traditional qualitative methods. These were interviews with principals at each of the five schools, shadowing of the principals following each interview, informal conversations with teachers recorded as field notes, observations of classroom instruction and staff meetings recorded as field notes, and document analysis.

### Principal Interviews

Two semi-structured, individual interviews with each principal took place at their school during a school year for a total of 10 principal interviews. The first visit to the schools, stage one of data collection, occurred in October. Merriam (1998) advised the qualitative researcher to be sensitive to the context and all the variables within it. Taking an interest in the contextual changes and challenges of each participant allowed the researcher to develop and maintain trust and rapport with the participants throughout the study. On this visit, the researcher first sought to gain an understanding of the school's context.

To open the first interview, the researcher asked principals to talk about any major changes that had taken place for the principal and/or teachers this year. Principals were also asked to identify any new initiatives introduced this year. Then the researcher began to probe more specifically into the PD sessions the principal had attended recently. In

keeping with the research questions guiding the present study, principals were asked how they process new learning from PD experiences, how they determine the usefulness of the PD and if, and how, they apply new knowledge from PD in practice.

During the second school visits which took place in March, the researcher sought to clarify information provided by the principal in the first interview through a process of member checking. Specifically, the researcher restated what the principal had said about the acquisition, contextualization, and application of new PD learning and asked for their feedback .Additionally, in this second stage of data collection, the researcher sought to test and refine the SLIS model of PD learning by asking each principal to comment on whether the contextual considerations and applications of learning shared by those principals were similar or different for him or her. In this stage the principals were also asked to explain any other lenses of consideration they used when participating in and applying PD learning experiences. Being sensitive to the adjustments in normal routines made by these principals to accommodate the researcher, all principal interviews were limited to one hour. Principal interviews were tape-recorded and transcribed to be analyzed for recurring themes (Seidman, 2006; Spradley, 1980).

**Teacher Conversations**

This researcher chose to have informal conversations with teachers rather than tape-recorded interviews in order to build trust and rapport. This methodological decision was based on prior experiences during the SLIS case study school visits. During those visits, semi-structured tape recorded interviews were scheduled with teachers individually Teachers were often hesitant to speak with the researcher with one teacher going so far as

to say she didn't "have time for this that day." In some cases teachers seemed hesitant to respond to questions, couching their answers in comments such as "I know he tries" or "She has to wear too many hats."

This methodological decision was validated during the initial school visits for the present study. Perhaps as a result of teachers' perceptions of the recent focus on teacher evaluation measures in this state, teachers viewed outsiders with caution. One teacher, recognizing the researcher from previous SLIS work at another school, commented teachers in schools felt "under attack" by outsiders. Another barrier to scheduled interviews with teachers was created by staffing cuts in paraprofessional positions at all schools making it impossible for most principals to arrange for supervision of students so teachers could speak with the researcher.

Based on prior experiences and these observations, this researcher concluded that by trying to engage reluctant teachers in tape-recorded conversations, a barrier to future entry into these sites might be created. Thus, the goal for interactions with teachers on this first visit was to establish contact as a familiar face, to compliment them on their students and classrooms, and to thank them for the opportunity to visit their classrooms. The goal for subsequent visits was to have more informal conversations with teachers around topics related to school improvement initiatives and how new initiatives have been introduced, implemented, and managed. However, during the initial school visits some teachers did volunteer to speak with the researcher. During the second visit this researcher was able to have informal conversations with teachers during classroom visits, during lunch, or when teachers stopped to talk as they saw the researcher working on

field notes in hallways. In total, eighteen informal conversations took place with teachers throughout the school visits. These voluntary conversations with teachers during both visits were recorded as field notes immediately following the events (Emerson et al., 1995).

**Observations**

During each of the first two school visits, the researcher shadowed the principal throughout the day. Additionally, following each principal interview the researcher visited classrooms recommended by the principal. A total of 75 classroom observations took place over the course of the study with most classroom visits lasting 20 to 30 minutes. The number of classes visited at each school ranged from 10 to 18 classrooms over the course of the study. In schools where staff meetings were scheduled on the day of the visit, the researcher was invited to attend these meetings. The researcher was able to attend a total of five staff meetings, during the first two visits

During the final visit to the schools, stage three of data collection, the researcher collected data by observing principals interactions with their teachers during campus-based PD sessions. These observations took place at each of the five schools on district mandated PD days for teachers prior to the start of the new school year. Observations from meetings and classroom visits were recorded as field notes immediately following the events to insure reliability (Emerson et al., 1995).

**Triangulation of Data Collection**

The purpose of the observations and informal conversations with teachers was to triangulate self-reports by the principal. The informal conversations with teachers were

intended to elicit information about the school-wide goals for the year, how the goals were introduced, how the principal provided support for teachers working toward the school-wide goals, the impact of local, state, and national mandates on teachers, and the principals' support for teachers throughout periods of change. These informal conversations took place in the classroom when possible, or during the teacher's planning period, or at lunchtime and were recorded as field notes.

In the final phase of data collection, each school was visited a third time, during the teacher in-service time prior to the start of a new school year for the purpose of collecting observation data to triangulate principals' self-reports in the previous interviews. Again the data collected from these observations was recorded as field notes. The repeated interviews and observations were conducted and data was collected until no new information was obtained, thus achieving saturation (Creswell, 2007; Denzin & Lincoln, 2005).

Additionally, the researcher collected documents at each school during the all three visits. Documents can which provide a rich source of contextually relevant information and were used to test whether the perceptions emerging from the interviews and observations were accurate (Lincoln & Guba, 1985). Documents collected included school improvement meeting agendas, presentations of student achievement scores prepared for community members, staff meeting agendas, PD agendas and sample activities, and a parent newsletter. These documents were analyzed to corroborate self-reports by the principals and to provide further insight into the work of the principal (Yin, 2009).

**Data Management**

According to Miles and Huberman (1994), planning for data management is an important precursor to data collection in a qualitative study. Because data collection and data analysis are concurrent activities in qualitative research, a data management plan must be developed at the outset of the study. Planning data management makes replications of a study possible in the future, ensures that data is not misplaced, and adds to the trustworthiness of the findings. Without a data management plan the researcher could be overwhelmed by massive amounts of data.

Data management plans for the present study included (a) preparing a way to organize and securely store the data, (b) constructing a process chart of the research phases, and (c) planning to record the steps in the research process in a methodological log while simultaneously keeping a reflexive journal about the study.

First, all interview and observational data were saved in the original format and in an electronic format. Data was stored on a drive on the computer accessible only to the researcher and on a portable jump drive kept in a secure location known only to the researcher. In addition, hard copies of all transcripts and field notes were secured in a locked file cabinet in a locked office to which only the researcher had a key.

Second, the researcher followed a process illustrating the research phases: data collection, data reduction, and data analysis. It is important to note, however, that data collection, data reduction, and data analysis were all part of the ongoing, cyclical, and recursive process of research. The qualitative researcher does not wait for data collection

to stop before beginning to reduce the data or analyze the data (Hays & Singh, 2012). This recursive process continued until no new information was obtained (saturation).

## Data Analysis and Interpretation

A qualitative thematic strategy of data analysis, based on Glaser and Strauss' (1967) constant comparative approach, was used to categorize and make judgments about the meaning of the data from the principal interviews (Boyatzis, 1998). The constant comparative approach involves coding a unit of data into a category and comparing it with previous units of data coded into that category. The coding was based on a prior research approach where codes were developed using the SLIS model for principal PD (Schroeder & Madsen, 2010) based on Daley's (2000) PD learning model. Codes were also developed using Halverson's (2004) concept of phronesis for school leaders and Weick's (1995) theory of sense making in organizations. These codes were utilized to explain connections between the broader themes. Disconfirming evidence was identified and coded also.

During the first steps of data reduction, identified the initial data analysis, transcripts were read first one by one. The coding process began by underlining passages that were relevant to the research questions:

1. How do principals process and contextualize their learning experiences both in the PD session and once they return to their schools?
2. Do principals apply their PD learning experiences in practice, and if so, how do they do that?
3. What aspects of PD experiences are most useful to principals and why?

In addition, it is important for the researcher to read the transcripts with an open mind, letting the interview "breathe and speak for itself" (Seidman, 2006, p. 117). Therefore, during the initial reading of the transcripts, passages that provided insights into the principal's context of practice or seemed interesting were also underlined.

In this initial data analysis stage, data was coded using the a priori research codes that emerged in the prior research model from the SLIS study. Additionally, new codes were developed to categorize principals' responses to this first set of interview questions. Thus, the coding process involved studying and categorizing the data based on principals' responses. Each code was given a label, characteristics, a description, and qualifications and exclusions of the code (Boyatzis, 1998). Then the labeled codes, referred to as concepts (Corbin & Strauss, 2008), were grouped into categories, and referred to as themes.

Then memos were written summarizing each principal's explanation of the changes introduced and new initiatives in place at their school. Other memos summarized each principal's response to questions asking them to comment on "best" PD learning experiences, their application—if any—of new learning, changes in practice as a consequence of new learning, and why they did or did not utilize new learning. These memos were utilized to develop member checking questions for the second interview. Based on these memos and the coding process the researcher wrote within case summaries from the first wave of data collection as part of a data reduction process. These summaries, as a data reduction strategy, created descriptions of principals' acquisition, contextualization, and application of new learning.

This process of summarizing each principal's responses to the questions and creating memos was repeated following the second visits to the case study schools. After the second visit, the researcher continued to code the data using the a priori research codes that emerged in the prior research model. Also, as new categories emerged from the second wave of data, new codes were developed. The constant comparative approach allowed for the ongoing validation, development, and adjustment of emerging themes as additional data collection took place throughout the study.

Moving into the next phase, identified as secondary data analysis, the with-in case summaries were then combined according to the a priori themes that emerged from the prior research as well as according to emerging themes. Data collection was considered adequate and complete when saturation was achieved, meaning no new themes were emerging from the data (Rudestam & Newton, 2007). The emerging themes were used to explore how principals process and contextualize new knowledge acquired in PD, how they connect their new knowledge to their school context and their practice, and what aspects of PD learning experiences are most useful to principals and why.

In this secondary phase of data reduction, the within-case summaries were combined in a data display. Miles and Huberman (1994) advocated for the use of a data display in order to present information systematically so the researcher can draw valid conclusions. The purpose of the\is data display, a thematic conceptual matrix, is to identify patterns, trends, and ultimately themes that would lead to the validation and refinement of the prior research model of professional learning for principals. This thematic conceptual matrix was further expanded by including quotes from the

transcripts. The reduced and condensed data in a thematic conceptual matrix is another data management strategy to avoid cumbersome, poorly organized data sets that bring into question future study replications and the trustworthiness of the findings.

Upon completion of the data analysis as described above, generalizations about the case study were developed based on the identified themes. This is the third phase of the data reduction process identified as conclusion drawing and verification (Miles & Huberman, 1994). In this phase constant comparative approach continued to be utilized and a focus on triangulation of findings occurred.

These generalizations were then compared and contrasted to the SLIS prior research model. For verification purposes, teacher interviews, observations, and documents were analyzed to triangulate the findings from the principals' interviews. Member checking was used to ensure reliable interpretation of the data (Merriam, 1998). Several other techniques were employed to increase the probability of producing credible findings and interpretations from the study (Creswell, 2007; Lincoln & Guba, 1985). These techniques are explained in the following section.

## Trustworthiness

Establishing trustworthiness of a study is essential if the researcher is to persuade an audience that the findings are worth attending to and worth considering. In quantitative work, criteria typically associated with this task are called internal validity, external validity, reliability, and objectivity (Lincoln & Guba, 1985). In brief, internal validity is the extent to which variations in an outcome, or dependent variable can be attributed to manipulations of an independent variable and external validity refers to the

extent that the relationship between the two variables can be generalized to other settings and individuals. Reliability is often associated with validity in terms of consistency and accuracy of measures used in the study. Objectivity insures that a study is not contaminated by human weaknesses that produce variations in approaches used to conduct the study. Finding these conventional criteria for establishing trustworthiness inappropriate for the naturalistic inquiries of qualitative research, Lincoln and Guba (1985) offered four alternative criteria: (a) truth value, (b) applicability, (c) consistency, (d) neutrality.

Truth value, referred to as credibility, is enhanced by prolonged engagement, persistent observation, and triangulation (Lincoln & Guba, 1985). First, prolonged engagement in the research setting during repeated visits for interviews and observations allowed the researcher to learn the context, build trust with the participants, and test for misinformation. Second, persistent observation occurred by spending a full school day in the setting during two of the three visits to each school. All-inclusive visits facilitate the identification of the most significant information as well as any atypical events requiring further investigation. Third, the researcher used multiple methods of data collection through field notes and document acquisition, to substantiate (triangulate) the findings from the principals' interviews (Lincoln & Guba, 1985). As a part of the conclusion drawing and verification phase of data analysis, credibility of emerging themes was validated through member checking by taking the themes back to the respondents for their review and reaction (Lincoln & Guba, 1985) and through peer debriefing by members of the researcher's dissertation committee (Merriam, 1998).

Applicability, offered as an alternative to the more conventional experimental or quasi-experimental criteria of external validity is referred to as transferability by Lincoln and Guba (1985). They assert that the naturalistic researcher cannot make assertions about the transferability of findings to other contexts. Instead, judgments of transferability of the findings are the task of the reader. However, in order for the reader to assess applicability of findings to his or her context, the researcher must fully describing the context and time in which the findings were identified, and provide a thick description of all activities in the research setting. They noted, "The description must specify everything that a reader may need to know in order to understand the findings" (p. 125). In other words, the researcher does not make claims of transferability, but rather provides the data so that transferability judgments are possible for those who may wish to apply the findings.

Reliability of the findings, whether the findings of the study are consistent with the data collected, was be addressed by the recording and transcription of interviews with the principals, by the maintenance of an audit trail, and by keeping a reflexive journal during the study (Lincoln & Guba, 1985). From the audit trail, the process of the study and its products (data, findings, and interpretations) were continuously examined by the researcher's dissertation committee chairperson. The reflexive journal addressed both consistency and neutrality of findings. First consistency was enhanced by documenting study logistics such as the researcher's daily schedule during data collection, the methodological decisions made as well as the reasons for making them, and the researcher's activities during data analysis. Second, neutrality of findings was enhanced

by keeping the reflexive journal to record the researcher's reflections and speculations throughout the study.

## Summary

The purpose of this chapter was to provide a methodological explanation of the processes used to test, validate, and refine a prior research model of principals' thinking processes that mediate between the acquisition and application of new knowledge gained from PD. This case study research extended prior qualitative research completed as part of a mixed methods project, the School Leadership Improvement Study (SLIS).

A single case embedded design was utilized that included five schools located in small, rural communities in a northern state. As in the prior research, traditional qualitative data collection methods were employed. These were interviews with principals at each of the five schools, informal conversations with teachers recorded as field notes, observations of classroom instruction and staff meetings recorded as field notes, and document analysis.

A qualitative thematic strategy of data analysis, based on Glaser and Strauss' (1967) constant comparative approach, was used to categorize and make judgments about the meaning of the data (Boyatzis, 1998). The coding process was based on a prior research approach in which codes were developed using findings from the prior research model of principals' PD learning that emerged from the SLIS work (Schroeder & Madsen, 2010). In addition, transcripts were read with an open mind, letting the interview "breathe and speak for itself" (Seidman, 2006, p. 117) and allowing for new themes to be identified in the data.

Several techniques were used to increase the probability of producing credible findings and interpretations from the study (Creswell, 2007; Lincoln & Guba, 1985) including multiple visits to the schools, triangulation of findings, member checking, and peer debriefing with members of my committee. Those findings are presented in the next chapter.

# CHAPTER IV

# RESULTS

This chapter presents the results of the present study's validation and refinement of the prior research model. As previously discussed in Chapter I, the prior research resulted in a model for principals' acquisition, contextualization, and application of professional development (PD) knowledge (see Figure 1). First, that model suggested that the acquisition of new knowledge is facilitated by learning in a social context. Second, principals contextualized new knowledge by considering the structural, political, and human relations constraints and supports in their schools. Third, application of knowledge spanned a continuum from a deeper understanding of practice to some small changes in practice. Overall, a principal's phronesis, or practical wisdom, was found to mediate the connections between knowledge acquisition and its application.

## Overview of the Results

In the present study, as in the prior research, principals were asked to reflect on their PD experiences and to explain how they used new knowledge from those experiences. However, while principals in the prior study were asked to reflect on a specific PD experience (the Balanced Leadership Professional Development program), the principals in the present study were asked to reflect on any and all PD they had attended during their tenure as a principal. Principals receive PD at professional association meetings, from their intermediate school district (ISD) and school districts, and from university summer institutes. PD topics range from presentations of theoretical

research knowledge to technical how-to sessions such as improving communication, motivating staff, and learning about policy and program implementation. For the principals in the present study, their PD in the 1 year since the BLPD training was nearly exclusively focused on the implementation of policies and programs.

Results from the present study supported the three major themes from the prior research: (a) learning in a social context, (b) contextual considerations that affect the application of learning, and (c) learning outcomes. Within each major theme, the subthemes from the prior research also were supported. The subthemes are included in Figure 1 presented in Chapter I. Also, the present study substantiated the role of phronesis as a mediating factor during the principal's considerations of new knowledge application. In addition to validating the prior research model, three new findings emerged from the present study.

First, principals engaged in a sense-making process (Weick, 1995) as they initially reflected on their new learning both while in the PD sessions and upon their return to their schools. Principals made retrospective sense of their current situations with their new knowledge in mind, trying to fit the new knowledge into current practices and past experiences. Principals engaged in sense making by talking about what they learned in a PD session and how that affirmed much of their current practices. Through these conversations they were grounding their identity, also an important focus of sensemaking (Weick, 1995; Weick, Sutcliffe, & Obstfeld, 2005). For example, principals in the present study referred to themselves as "a relational person" or as a "data person." The cognitive actions associated with activities such as reflection and talking about their practice

represent the sensemaking principals engage in to process new learning (R. Halverson, personal communication, April 27, 2013). Likewise, Daley (2000) acknowledged the importance of professionals' cognitive processing of new knowledge. Daley stated new knowledge becomes meaningful as practitioners engage in a process of thinking, feeling, and acting on new knowledge in their own context. As principals contemplated acting on new knowledge they first talked about the constraints and supports present in their context of practice.

The results of the present study revealed a second new finding. That finding was related to the role of contextual constraints and supports influencing the application of learning. The new finding suggested the contextual considerations affecting the application of learning are not specific, discrete factors through which principals view new knowledge. Instead, contextual considerations are both broad and specific and they overlap each other during a principal's contemplation of new knowledge. For example, one principal, Mr. Holland, responded as follows when asked to comment on whether or not he considered the application of new knowledge by thinking about the structure, or politics, or human relations aspects of his context of practice:

> From my lens, I can probably break it down and say this and such but again I don't want to just see that (consideration) as a certain one. You know I think it depends on; they fall into different places during different parts of the journey of the process of the issue at hand.

The third new finding was the ongoing recursive nature of the process of acquiring, contextualizing, and applying new knowledge from PD. Part of principal's new knowledge application is the diffusion of their learning to the practices they engage in with their teachers. Often this diffusion was so subtle that teachers did to recognize

changes in their principal's habits. In fact, because principals did not view themselves as making big changes in their habits of practice, it was not surprising that teachers did not report any discernible changes in their principal's practices. Mr. Holland also commented, "I haven't really changed the manner in which I introduce something new necessarily. It's more the rate at which they (teachers) possibly take it and run with it and I don't even think they realize it."

To more thoroughly illustrate the findings that led to the validation as well as enhancement of the prior research model, each part of the model is discussed in more detail. The next section of this chapter examines principals' learning experiences in a social context, specifically while attending PD sessions.

## Learning In a Social Context

Scholars have suggested learning in a social context is important because learning is socially constructed. Individual learning occurs collaboratively and cooperatively through interactions with others (Gergen, 1995). By engaging with others in conversations and activities, the adult learner can critically explore others' viewpoints about new knowledge (Vygotsky, 1978).

As the principals in the present study reflected on their acquisition and processing of knowledge during PD experiences, they demonstrated a constructivist learning style when they talked about the importance of having time to reflect on their leadership skills. They also engaged in social construction of knowledge by sharing understandings of new learning with other principals.

Three subthemes related to knowledge construction in a social context emerged from the data to confirm the prior research findings. Figure 3 depicts these subthemes. First, interactions with other administrators during the PD sessions facilitated learning of new material. Second, principals found the opportunity to exchange ideas and problem solve in a group beneficial. Third, principals were able to form supportive networks extending beyond the sessions, something very important to these principals who practiced in rural and remote environments. Each of these three subthemes is discussed in more detail next.

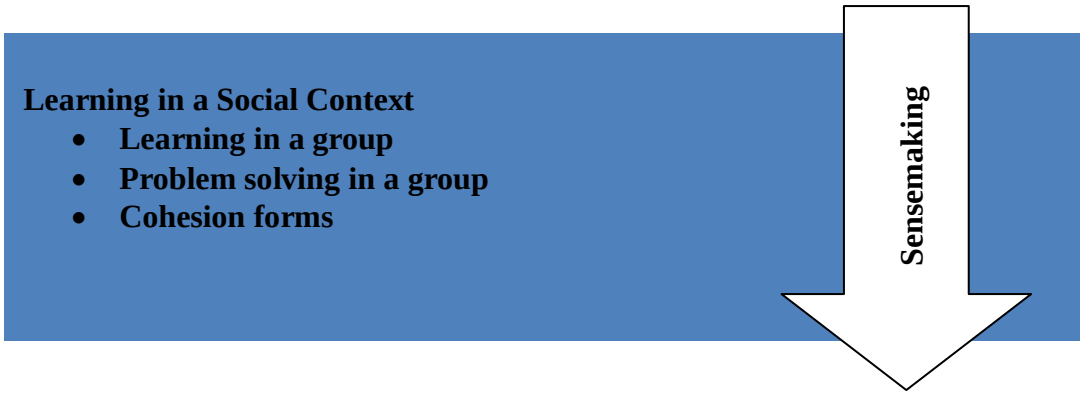


*Figure 3.* Principals' acquisition of professional development knowledge: Learning in a social context.

## Learning in a Group

Principals all reported the value of processing new learning about leadership in a group both in the prior study and the present study. In the prior study, principals viewed the opportunity to learn about leadership in the Balanced Leadership Professional Development program (BLPD) as a time to sit, listen, and converse about leadership without interruptions. A principal stated, "When you're in the trenches you're about tasks

or what's out there. When I go to the Leadership Training, I'm just focused on leadership and style of things that will help me be a better leader" (Schroeder & Madsen, 2011, p. 20).

Likewise, principals in the present study found value in attending PD sessions with fellow principals from similar contexts. Mrs. Hill identified the best part of learning as being able to be with other principals. She said, "I like to reflect and I like to share, so when I learn something, I like to talk about it and hear different perspectives." Speaking to the influence of learning in a group on later application of new learning once back at her school she said, "I don't think I could really absorb or be able to practice or feel, be able to take risks or move forward without bouncing off others."

The opportunity to share experiences with other principals during PD sessions was reported by Mr. Washington as one of the most beneficial outcomes of a PD experience. He said:

> The ability to hear another practicing principal talk through their experience or their problem solving, the, the way they handled a situation in most cases is valuable, I would, 'boy that's a great idea,' or 'oh boy I wouldn't have done it that way.' You know, there's an ability to pick something up there, you know what I'm saying, so that's very helpful.

This process of learning both individually and in a group reflects cognitive learning theory where there is a focus on the internal mental processes which the learner controls (Merriam et al., 2007) and social cognitive learning theory which takes into account the learner and the learner's environment (Bandura, 1986). Salomon and Perkins (1998) advocated for both individually and socially constructed learning when they suggested that individual and social aspects of learning interact and strengthen each other

in a “reciprocal spiral relationship” (p. 18). Opportunities to learn in a group also provide principals with new insights into problem framing and problem solving. This is the second subtheme related to learning in a social context.

**Problem Solving in a Group**

Intellectual development has been found to occur through observations of others engaged in problem-solving (Bandura, 1986) and through the convergence of speech and practical activity (Vygotsky, 1978). The principals in the prior research project described the opportunities to work on activities in groups as a chance to learn “someone else’s ‘take’ on a situation, sharing and seeing how things are done elsewhere, and seeing how there are different ways to attack a problem” (Schroeder & Madsen, 2011, p. 18).

PD activities that involved problem solving gave principals the opportunity to reframe their problems using the new insights gained from these activities and apply those new insights against the backdrop of their particular context. Leithwood and Steinbach (1992) found that a program providing strategic and practical knowledge along with opportunities for principals to share knowledge acquired through experiences improved principals’ problem solving processes. Likewise, Daley (2001) found that the professionals she studied reported changing their practices based on new understandings.

Additionally, Mrs. Hill, a principal in the current study, found it beneficial to learn in a group of principals with varying levels of experience. Having recently completed classes for principal certification prior to attending the BLPD program, she compared the experiences of learning in two different groups this way:

> It was more real world because I was talking with current principals who were living the process. It was interesting to hear and watch their

> transformation because they've come from the managerial style transitioning to the instructional leader style. So that was very enlightening to me and it was very good. The leadership classes where you're surrounded by aspiring leaders you have a whole different interaction and perspective. You're living in that ideal world and not in the reality world and I've noticed a huge difference in what ideally we say should happen and then talking to current administrators what the reality is.

This comment alludes to the value of including principals with varying levels of experience in problem solving activities provided during PD. While it has been suggested that more experienced principals can support novice principals in the development of problems solving skills (Barnett, 1995; Costa & Garmston, 1994), others have suggested that for principals with considerable expertise the response to problems may become so automatic as to inhibit reflection on current practices. Therefore, PD for experienced principals that includes opportunities to reflect and converse about entrenched practices may be beneficial in helping these principals respond to novel problems in their context (Bredeson, 2004; Leithwood & Steinbach, 1992).

As a consequence of problem solving discussions during a PD experience a principal reported gaining more confidence in his problem-solving ability. Mr. Mitchell, having over 30 years' experience in education and faced with rebuilding his community's trust and confidence in the school within the community following a high school rating of "persistently low achieving" amid declining enrollment, commented:

> I learned a ton of stuff from my colleagues there and not only that but it was hopeful too. I talked to a superintendent principal from another town and she basically gave me hope because she was so positive and she was my age.

Mrs. Hill shed light on similar affirmations gained from the experiences of problem solving in groups. She said, "Providing us with that professional team time to have those conversations, to be able to say, okay how did you get that, what did we do, because we need that support."

From these experiences new collegial relationships formed among the participants. The principals in the prior research project spoke positively about the collegiality that evolved during the BLPD program as well as networking that continues beyond PD. Likewise, the principals in the present study valued the communication that continues with colleagues after a PD program. The emergence of cohesion within groups and networking during and after PD experiences is the third subtheme associated with learning in a social context.

**Cohesion Forms within a Group**

In the prior study, several principals spoke of the value they found in having time at the BLPD sessions to build relationships with other principals. In fact, Mrs. Hill noted that she has a "standing lunch date" with a middle school principal she met at the BLPD because "it's very good for us to talk about schedules and changes."

The five principals participating in the present study were all part of the same ISD. In this state, the ISD is a larger organizational unit designed to provide support services to schools, mainly in the form of personnel. ISD personnel provide resources, materials, and PD for teachers and specialized services for students. The five principals had intended to formalize their networking opportunities through the ISD following the BLPD sessions. Mr. Washington explained, "We did meet a couple times to try to keep

us alive and keep us motivated to further our work relative to leadership." However, he also reported that the person from the ISD who had organized the post-BLPD meetings had retired recently and the follow up meetings intended to keep the conversations about leadership "alive" had ended.

Given that these principals were all from very rural areas and were the only administrator in their school, it was not surprising that they valued the connections they made with colleagues during PD experiences. As Mr. Lexington noted elementary principals in this setting are usually "the lone wolf in the building" so it was not surprising that these connections became networks of support for the principals remaining in place after the PD experience was over. Every principal spoke of the value of meeting other principals facing similar challenges and having discussions during the PD sessions over breakfast or lunch. Mrs. Hill called these conversations "shared experiences" and said, "I think that could be the most valuable thing we can do."

Principals also appreciated working in different groups during various activities included in PD sessions. Speaking about a PD program where principals often moved to different groups during a day, Mr. Holland said:

> What I really like was being able to sit where we want to sit, like our initial groups. That was important to me. Then to be able to mix it up and go into different groups that was just a great way of doing it.

Finding value in shared experiences and making connections that extend beyond a PD session validated a finding from the prior study. Mr. Lexington explained that continuing connection this way:

> And so you converse with them and meet with them and network with them. Then you're going "I'm having trouble with this or I need this." So I

> can call you know. I can call a Todd Jones and say "Hey what would you do in this situation? I've got this going on."

Mr. Lexington elaborated that because he now knows people with skill sets that are better in one area than his he can make a phone call "instead of floundering through it." He concluded, "I've been around the block enough times to know what I don't know and to go ahead and make a call." Similarly, Mrs. Hill also mentioned the value in networking with others whose strengths were different from her own as a way to continually progress as a leader. She said, "We need to be able to communicate those weak areas with someone who's stronger at them so I can improve and I can reflect and I can move forward."

The comments from these five principals about the importance of opportunities to network with other principals were consistent with Daley's (2000) findings. The nurses Daley studied reported some of their best learning happened when they conversed with colleagues about their specific situations.

In addition to asking principals to reflect on their PD experiences from an affective perspective, principals in the present study were also asked to reflect on the utility of these experiences. Daley (2000), in her work with professionals and their experiences in CPE, concluded that knowledge use is influenced by the particular professional practice and its link to the specific context of that practice. As principals talked about their use of knowledge gained from PD, the contextual considerations mediating the transfer of learning to practice that emerged from the prior study findings were confirmed and elaborated upon. Although the three subthemes identified in the prior study remained evident, what became clear in this work was that the contextual

considerations were not discrete factors, but instead overlap and operate as a whole, not parts, to filter the application of new knowledge into practice.

Additionally, evidence of sensemaking was evident as these principals engaged in the cognitive activities of reflection and talking about why they may or may not utilize new knowledge. Like those scholars who propose that learning is facilitate by interactions with other learners (e.g., Salomon & Perkins, 1998), Daley (2000) also noted when the professionals talked about the new learning with one another they were working to make sense of the new information. These principals engaged in cognitive activities that included both fitting the new information into pre-existing mental models as well as sharing their understandings of it with others. These cognitive activities represented the process of sensemaking taking place while principals were in PD sessions (R. Halverson, personal communication, April 27, 2013). Evidence of sensemaking by principals is presented next as a refinement of the prior research model.

## Sensemaking by Principals

### Sensemaking While in PD Sessions

Principals were asked to reflect on their recent PD experiences and share experiences that stood out as being the best and explain why. In their responses, these principals demonstrated the sensemaking that occurred while in PD sessions. Describing what several principals called PD experiences that are "real," Mr. Washington noted, "I think those experiences where I can draw an immediate correlation to what I do on a daily basis are generally the most beneficial to me." Similarly, Mr. Mitchell said, "So you gleam the stuff that you can use and you can take back. You might spend- you might go

to a three day conference and only come up with one idea. But then it's worth it." These kinds of comments reflected the cognitive activities associated with sensemaking described by Weick (1995) as follows: "So far I have argued that sensemaking is about such things as placement of items into frameworks, comprehending, redressing surprise, constructing meaning, interacting in pursuit of mutual understanding, and patterning."

For these principals, a PD experience that is "real," or as another principal described "catches me," connected to the current challenges of their practice. In the recent turbulent times experienced by these principals district budget shortfalls resulted in staffing cuts for 4 consecutive years at the same time the state legislature has mandated changes in curriculum, student assessment, and the teacher evaluation system. According to Weick et al. (2005), sensemaking starts with chaos or change. During times of chaos or change individuals' activities are interrupted by incongruent cues in their environment. Mr. Washington gave an example of incongruent cues experienced in his practice when he stated, "We need to give them [teachers] tools and resources to boost that [student] performance up, but we as principals are being told, 'don't spend,' you know we can't spend any more."

According to Weick (1995), individuals in situations like Mr. Washington described search retrospectively for plausible meanings to rationalize discrepant cues. As an example of a search for plausible meanings, Weick recounted how one of the operators at the Bhopal plant said he smelled the dangerous chemical in the air, but others in his group dismissed his assertion because that chemical production facility had been shut down for the past 6 weeks. They suggested he was smelling mosquito spray instead.

Similarly, more than one principal in the present study spoke of finding plausible meanings to rationalize all the discrepant cues surrounding recent changes in education. Mrs. Hill said:

> I know the intent is to improve education for kids, and I truly believe that. And I keep trying to tell teachers if you, if we practice good strategies, if we do--you're ok, we're ok, we can make it through. You know, whether it's evaluation or the accountability, it doesn't matter. We're going to do what's best for kids. We're going to stand by, we're going to have fun, we're going to have engaged learning and do good solid strategies. So yes that cloud is there. Yes I think that's impacted the morale.

In the search for plausible meanings to rationalize a crisis or turbulent change, the individual brackets certain cues from the environment and interprets those cues based on frames of reference acquired from training, work, or life experiences (Maitlis & Sonenshein, 2010; Weick et al., 2005). Searching for a way to make sense of the teacher evaluation system, a principal drew on frames of reference acquired as new knowledge from another PD experience. Mr. Lexington said:

> Because we *have* to do some things, you know, the stuff we're doing with our evaluation system. In reflecting, I pull out some of the balanced leadership stuff quite a bit, especially with all the change we've been through. Just looking at some of the things that over time I've done well with and other things that you know you don't. All right, so to make it smoother and the things I don't, what are those I need to kick in a little bit or ramp up a little bit, again to make this whole thing [new teacher evaluation system] smoother.

Likewise, Daley (1997, 1999, 2001, 2004) found in her studies of CPE the process of making meaning from new knowledge was influenced during the learning experience by the particular professional work and the particular context of the professional's work. Similarly, the principals in the present study reported that when presented with new knowledge, often in the form of policy mandates, they searched for

plausible understandings by drawing on existing frames of reference. This process of making sense of the new learning that began while principals were in PD sessions continued when they returned to their schools.

**Sensemaking by Principals upon Their Return to Practice**

When principals returned to their schools after PD sessions, they continued to process the new information in several ways. They considered the new information in light of their sense of self (i.e., their identity) and by recalling past experiences, (i.e. being retrospective). These principals demonstrated three additional properties of sensemaking identified by Weick (1995) as they began to consider the use of their new knowledge. These three additional properties are that sensemaking is (a) enactive of sensible environments, (b) social, and (c) ongoing. Describing what is meant by saying sensemaking is enactive of sensible environments, Weick asserted that when people in organizations speak about the environment as something that is fixed, they are overlooking that people are very much a part of their environment. Weick offered the example of an air traffic controller who put five aircraft in holding pattern leading to an environment he was increasingly unable to control as an example of individuals creating their own opportunities and constraints within their environment (p. 31). Several principals in the prior study as well as in the present study demonstrated how their responses to stimuli in their environment subsequently shaped their environment.

For example, as the accountability movement in schools took shape, there was a strong emphasis on using data to inform decision-making. Mr. Washington recounted his response to that stimulus in his environment and the unintended consequence:

> Because I am the data results type of person, I did make mistakes in the past of coming on too strong, too hard, that type of thing. And it messed up the culture. It messed up collegial relationships. And in some cases, for a few people who have like minds, thought it was great. It's fantastic, you know. But those that are not (data driven) - I burned bridges that hind sight says "Okay, you could have done that differently." So I approached it differently.

Mrs. Hill illustrated how her environment, the layout of her building such that her office was in an isolated corner away from the classroom areas, led to a false perception among her teachers concerning her visibility and availability.

> The perception is that I was out of the building and their perception, they say this frequently, well with your [K-6] curriculum hat (i.e. responsibilities) you're not here. The reality is I was here. It's just the layout of the building is very isolated so if I'm in here talking to you or in here talking to kids or parents or other teachers, they think I'm out of the building. So one of the goals is to be more visible and so during changing times, be there in the hallway. You know, try to make sure that I schedule my day as such so I can be out so they see me. It still is difficult and I don't know how to fix that. If I'm down the hall and they say, 'I didn't even know you were here', 'I've been here all day!' Just if I'm out in the rooms, they don't know.

This comment from Mrs. Hill also demonstrated another property of sensemaking, its social nature. Weick (1995) stated, "Sensemaking is never solitary because what a person does internally is contingent on others" (p. 40). As a consequence of stimuli in the environment, individuals take account of what others are doing and respond. The actions of others can cause the individual to pursue a response, revise it, suspend it, or intensify the response. In summary, "One has to *fit* one's own line of activity in some manner to the actions of others (Blumer, 1969, p. 8). Thus, Mrs. Hill explained she had revised her communication practice in order to respond to her teachers' expectations of her visibility and availability.

> So anyway that's one thing I think I've shifted into as far as communication. I used to feel that I needed to be available by phone all the time and I found that I let that go to voicemail more often and deal with the face to face contact first whether I'm meeting with you or I'm meeting a staff member in the hall or whatever that may be, that goes secondary. And try to keep up. Get those voicemails and return calls.

Mr. Holland provided an example of sensemaking, specifically how cognitive thinking is intertwined with social interaction. When he was asked to talk about what went through his mind as he considered new ideas or expectations from the ISD, he responded with an example of a curriculum alignment project taking teachers from each school out of their classrooms for several days. The purpose of this alignment activity was to standardize the delivery of curriculum to students in any grade level at all schools throughout the ISD. This first comment illustrated Mr. Holland's cognitive thinking about the ISD project of curriculum alignment:

> And I think it was because they want us all on the same page and so on and again we have to be cautious of that. We all aren't the same. And interesting enough now, I think our program is going well, teachers seem to like it, parents seem to like it, and the kids love it. We've kind of circled the wagons I guess. It isn't if you're on top or not, it's, you know are we giving the best program for the kids that we can. And that's what we're trying to do and I did not, we did not take ourselves out very much [to ISD meetings] this year at all to work on curriculum.

As his reflections out loud continued, Mr. Holland demonstrated how social interactions such as conversations with his teachers, influenced his sensemaking of the ISD initiative:

> Well I'm still not sold; we did the ELA piece this year. Our teachers are doing that at the ISD. Right now as we end this year and we look to next year and they throw math hours as the next idea, my people, including myself, are not keen on taking that time out of the classroom to do it. My people are saying, and I don't know how much they really have time to be concerned if somebody leaves here then go somewhere else. I don't think they really think about that because I don't go there with it. Both my teacher representatives this year said to me in a very gracious way, "why

> are we re-inventing the wheel?" why are we going over there and taking the time out of class to do this? And of course that time is valuable and if you don't start on time, they don't like that, don't get out on time.

Finally, Weick (1995) asserted that another property of sensemaking was that it is ongoing. Often people found themselves in the midst of an ongoing situation and had to cope the best they could if they wanted to make sense of what was happening at that moment. Furthermore, Weick stated:

> Flows are the constants of sensemaking….To understand sensemaking is to be sensitive to the ways in which people chop moments out of continuous flows and extract cues from those moments. There is widespread recognition that people are always in the middle of things. (p. 43)

Efforts at sensemaking begin when the present state of practice appears to be different from what the individual expects and usually encounters in practice. Expected or typical experiences of practice are the flows that Weick mentions. When the flow of practice was disrupted or becomes incoherent in some way, individuals looked for reasons that would bring sense to the events and allow them to return to the interrupted activity and resume their practice (Weick et al., 2005).

The following quote provided an example of the ongoing nature of sensemaking for these principals as Mr. Washington reflected on recent changes and their effect:

> I mean, when you sat back, take a deep breath and look at it from the big picture, a lot of, a lot of, not all, but a lot of it makes some sense. You know it's good for kids too, it can be good for kids, it can be good for our profession. I mean, I'd be disappointed if they go back too far. But I do think they need, needed to provide a little more guidance and time for this huge change. I can only assume it's just as huge in many other states as it is here an issue, you know. I am pleased to see the Common Core come out so that we, now we can all be assured that we're all being held to the same bar and there's no, there's no ambiguity to it, you know? Oh, boy, it

> has definitely been a whirlwind, you know we've closed a building, we laid people off, we, you know, all kinds of stuff just to stay alive."

For Mr. Washington the closure of one elementary school and consolidation of those students into the remaining four elementary schools coupled with 4 years of budget cuts including staffing cutbacks were the interruptions in the flow of his usual practice as a principal. The usual flow of practice would have been learning the expectations of the new Math Common Core curriculum in order to be well-informed as he observed classroom instruction. Instead, the principal was focused on learning the names of 125 new students and their parents who were not happy about the closing of their neighborhood school and making them feel welcome at their new school.

Mrs. Hill described the interruption in the flow of usual practice for her teachers brought on by the same elementary school closure and the resulting realignment of her school from a middle school (i.e. Grades 6-8) to a fifth- and sixth-grade school. As a consequence, many teachers throughout the district were reassigned to different schools. She explained:

> A process about selecting which teachers was primarily certification, but we did have a number of teachers that wanted to come here to this building and teach and I had some – say, that then I did not [select], I mean some teachers the superintendent also just assigned. So there were some teachers that were assigned here, um, out of my control and out of their control, so. I've walked around, in the past two weeks I'd say, the climate is dramatically improved; prior to that it was very tense. Students adjusted fine, I really believe and I think teachers sucked it up, so to speak, for them. But you could just, I mean, staff was tense and I think just over the past two weeks—

Furthermore, Weick (1995) found that the interruptions to individuals' projects or "flows" typically produced an emotional response such as the tension noted by the

principal in the above quote. This emotional response then influenced sensemaking as the teachers initially “suck it up” for the students but eventually accepted their new assignments. Later, Weick (1988), in his study of the Bhopal chemical plant accident, found that shared meanings as well as emotions influence sensemaking during a crisis. Maitlis and Sonenshein (2010) then asserted that these two themes of shared meanings and emotions also underlie sensemaking in times of turbulent organizational change.

All of the principals in the present study talked about the uncertainty and insecurity surrounding the implementation of the new teacher evaluation system. This major organizational change in the way teachers are evaluated impacted principals’ and teachers’ shared meanings of identity, expectations, and commitment. For these principals their sense of self as a leader was clear. Mr. Lexington spoke extensively about how his identity guided his approach to the new teacher evaluation system. First, to describe himself he said:

> I came out of secondary into elementary and I was once told by an administrator up in the middle school, he says, "You're uh, you have an elementary mind," and I forget what his term was, but you are heavy elementary mindset with a secondary mind or something like that, you know. And I'm sitting there going, I didn't know whether I should be offended or what. He says, "No, you have the personal skills for elementary but you have the content skills of a secondary person." And I said, “Oh that sounds like it's a compliment.” And he told me it was meant to be. Uh, but yeah and most of it is handling staff. Is learning how to handle people and read them.

The value Mr. Lexington placed on his identity as a principal was evident when discussing his awareness of his strengths and weaknesses. He said:

> I’ve looked at some of the other administrators and some of their skill sets and I’ve said, “Damn, I wish I could do some stuff more like this person does.” But in order to do some of those things, if I have given up some of

> the things that I've done. You know I'm not willing to trade some of those things.

Next, when asked to talk about his strengths that he draws on to support his teachers during times of change, Mr. Lexington offers more insight into his self-identity. He said:

> Well, I think, you know, the relationship and trust, you know. That I'm accessible. I think they feel pretty comfortable if they need something or have a concern that they can come to me. And if they have a complaint, you know, come in, close the door and air it.

The interaction of a principal and teachers' shared identities are evident as Mr. Lexington reflects on efforts to make sense of the change in the teacher evaluation process. Mr. Lexington finds a discrepancy between the intent of the teacher evaluation system and the identities of his teachers:

> I have some older people who aren't as great with their technology use as some of the younger people, but they've got some of the skills handling parents and things like that that the younger ones don't and uh, so when you come down there, you know the, I think the intent on some of our legislators was, well, here's your district list, rate 'em. You know, put your top, bottom and then when you have to get rid of, you just take those bottom ones no matter who they are and away they go and our question to our legislators is, what if they're all proficient people? You know, what if you have a group of proficient and highly proficient people, you know, where do you draw the line?

Then, he alluded to the impact of all the recent changes in education on the identity and commitment of himself and his teachers. Evidence of the influence of emotions on sensemaking during times of turbulent change is found in the following comment by Mr. Lexington:

> Now you have a political situation where it seems like public ed. has targets on them and people are getting, you know, they are getting slammed all the time. Every time they turn around, you have an administration and political situation that is not the most supportive of

> public ed., and it seems like every time you read something that they're proposing that they're hitting you with something else.

Finally, he spoke about the emotional impact of all the recent changes in education on the morale of his teachers as well as his own morale.

> You have to do more with less. You know, I mean, money, morale. You know, you can only get hit with a stick so often without it affecting you. 'Cause our local politicians and stuff are always, you know, you guys make too much money, you know, you're doing so on and so on. Since when? Two years ago this wasn't even on the radar, so where's this all coming from? There's agendas at play.

Mr. Mitchell offered the following example of how he helps his staff rationalize the discrepant cues emanating from all the changes in education:

> I always tell them never forget why you're here. You know the primary reason people go into teaching has very little to do with test scores. If you ask a person, "Why are you going into teaching?" No person I have ever met said, "You know what, I'm going into teaching to raise test scores." No parent has ever come back to me and said, "Thank you. My child appreciates what you did because you raised test scores." I know they're important because the state says they're important, but the reality is that. The one main thing is make sure we keep our focus on the reason that we're here. Okay but I mean all of a sudden it's become more of a factory, I don't want this to be a factory. I want this to be a place of learning, I want this to be a place of caring, I want the people to come in here; I want the kids to be able to enjoy the experience. I don't want the kids to say, "Oh god, I graduated I'll never have to read a book again."

### Contextualization of Professional Development Knowledge

As principals engaged in sensemaking, represented by these kinds of reflections in action, three subthemes related to contextual considerations guiding the application of learning were identified in the prior research and confirmed in the present study. These three subthemes are (a) consideration of contextual structures, (b) consideration of

contextual politics, and (c) consideration of human relations. These contextual considerations are shown in Figure 4.

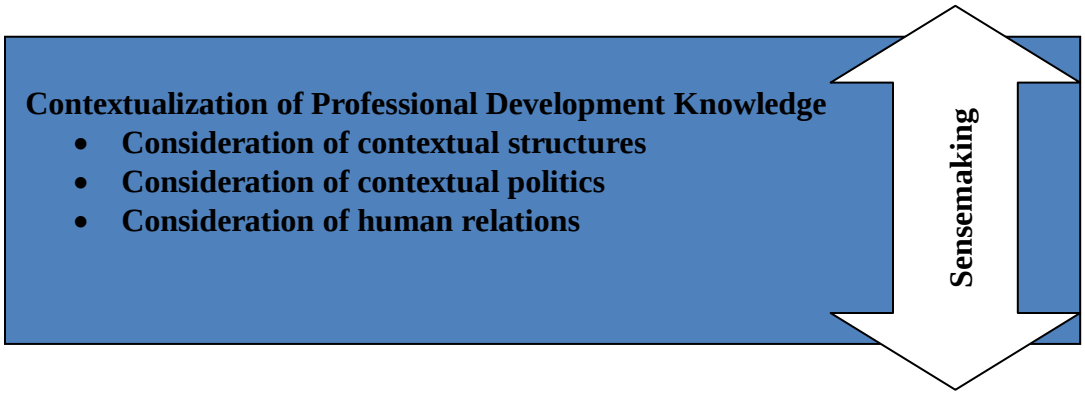


*Figure 4.* Principals' contextualization of professional development knowledge.

First, the principals noted they have to consider the structures present in their schools as well as how to manage those structures. These structures might be school characteristics such as demographics, programs, and schedules or their responsibilities serving in multiple roles or decreasing financial resources. Second, they reported internal and external politics are factors to be considered. For example, looming district budget deficits can cause frictions among groups within the school as staffing cuts are proposed. Finally, they thought about the human relationship aspect of their role such as keeping morale high enough so their teachers continue to put forth the efforts required to attain school improvement goals.

In addition, several other contextual considerations emerged from the present study as a refinement of the prior research. These were (a) time as a limited resource, (b) the importance of program coherence, and (c) the overarching influence of budgetary

realities. These subthemes are presented in greater detail next beginning with the validation of the original three themes and then moving to the additional contextual considerations representing the refinement of the model of principals' learning in PD.

**Consideration of Contextual Structures**

During the first interview that took place in October, principals were asked to talk about how the new school year was progressing. All principals began by describing changes in the structure of the school's operation. Some of these changes in structures were district-driven; others were ISD-driven. District-driven structural changes included school closures, school grade level reconfigurations, staffing changes and school budgets. ISD-driven changes generally consisted of program changes impacting the schools. Other changes, driven by state and national policies, included mandated program changes that impacted principal and teacher practices. Principals talked about how managing the changes in structure occupied so much of their time every day. Not only do structures limit how and where a principal spends time, they also present hurdles to implementing learning from PD.

The present study validated the findings from the prior study that a principal's practice was constrained by structural conditions outside of their control. Likewise, in the present study the principals spoke frequently about the influence of contextual structures, particularly district structures, on their practice. These contextual structures are shown in Figure 5 below.

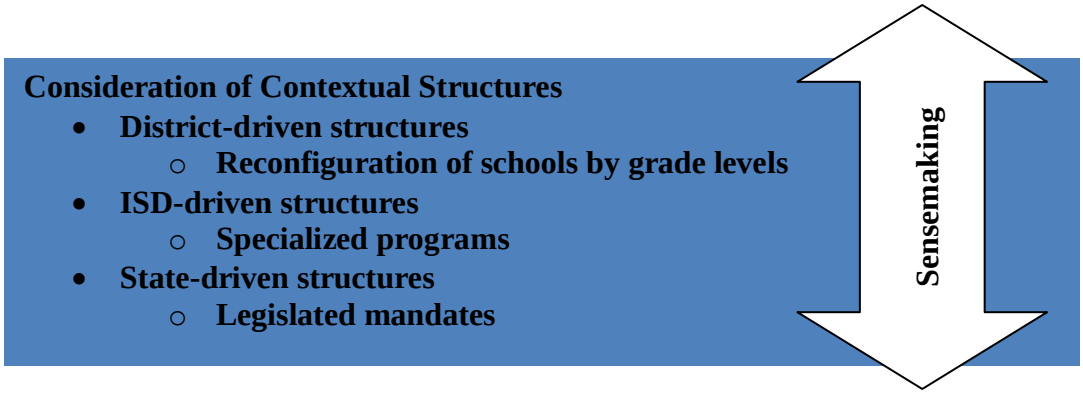


*Figure 5.* Principals' consideration of contextual structures.

**District-driven changes in structures.** For Mr. Washington operating in the context of district-driven changes in structures meant talking about the influx of 125 new children and families due to the closing of a neighborhood school in the district. Illustrating how this district-driven structural change constrained how a principal spent his time, Mr. Washington stated:

> But I'll also be very honest because of the state of flux, the, my focus on honing my leadership skill has kind of taken a back seat to just managing this building with, I've got over a hundred and twenty brand new faces in this building, when you're talking about a population of two hundred eighty five kids...between junior kindergarten, kindergarten, preschoolers and all the new kids that came from the closed school. You know, with those hundred and twenty kids come at least a hundred and twenty adults. That's really, has been my focus of culture building. You know trying to help people, the new people feel comfortable because a lot of them came here not wanting to, begrudgingly came.

As a result of the building reconfigurations in the district, Mrs. Hill's school changed from a six period day to a seven period day and the school calendar changed from a six week marking period to a nine week marking period. As a consequence of the

seven period day, the teachers saw more students each day and had less time per subject than they were used to having. Mrs. Hill explained:

> And part of the reasons for a nine week marking period was to accommodate the fifth grade students moving up and fifth grade teachers because they're used to a nine week marking period. So rather than change everything for everybody, you know, that was my call in the summer. I made it a nine week marking period. It would make it easier for scheduling for certain things that we have semester classes for sixth grade. So that decision was just mine over the summer. So there is some adjustment as far as their pacing of curriculum that they're adjusting to.

Explaining how these changes in structures affected the school's climate, she said, "In the past two weeks the climate is dramatically improved. And maybe from the staff meeting we had two weeks ago. Prior to that it was very tense."

In these conversations with the researcher, the principals were demonstrating the social characteristic of sensemaking as they talk about their interactions with parents and teachers around the structural changes. As previously noted, Weick (1995) asserted that sensemaking is never a solitary activity. Rather, individuals observe what others are doing and respond in some way. Thus, parents' and teachers' responses to the new surroundings in their environment created conditions principals must address.

In some cases, principals made a direct connection between district-driven structural changes and changes in the structure of their individual school. For Mrs. Hill the structure of the school changed physically as walls were added in classrooms to change from large, team-teaching rooms to more traditional self-contained rooms for fifth and sixth grade classrooms. Mr. Lexington, reflecting on the elementary school closure and resulting reconfiguration in the district noted:

> We also in this rearrangement, the building that was closed housed a group of rooms from our intermediate school district. Special education rooms, self-contained rooms and they got disbursed amongst the buildings and I picked up two which is a combination of their pre-primary impaired PPI type, and head start. So, I have a bunch of those little ones which are again, a lot of those are three year olds too that are now here in this building. So the feel of the building's much younger. You know, losing the fifth graders and then bringing in all these other youngsters in the building just feels younger, more classes at the lower grade levels.

Also for Mr. Lexington a change in staffing structure driven by district budget shortfalls affected his daily work as follows:

> This is our second full year without counseling. We pull from the junior high if we have a situation. Three years ago I had a half time counselor, but before that I pretty much had full, we had full time counseling and for me it has made a big difference. You know from my part here in the office. Cause a lot of those which seem to be petty discipline issues can be handled by a counselor and smoothed out. So now they become more of a discipline issue than a counseling issue.

**ISD-driven changes in structures.** Often changes in district-driven structures combined with ISD-driven structures impacted a principal's practice simultaneously. Like Mr. Lexington who experienced the addition of ISD sponsored pre-primary grade programs to his school, Mr. Holland spoke of the combined impact of district staffing cuts and an ISD program called "School of Choice." The State School Aid Act in this state allows local school districts to enroll students who reside in other local school districts within the same ISD. In practice, according to these principals parents transfer their children out of the school they are assigned to if that school is low performing or if for financial reasons the assigned school does not offer certain extra-curricular programs. Explaining the impact of this structure on practice, where student enrollment

unexpectedly exceeded projected enrollment at a "School of Choice," Mr. Holland shared:

> We ended up having a (grade) three four split, and finally in the fall we added a teacher. Honest to goodness as much as I really try to roll, I mean it just goofed everybody up: third grade and fourth grade teachers, kid, parents. I think that they suffered academically.

**State-driven changes in structures.** Another change in the structure of operations for all of the principals in the present study is driven by district implementation of a new state law that dramatically changed the teacher evaluation system. Previously, tenured teachers were evaluated every 3 years and non-tenure teachers were evaluated annually. Now all teachers are evaluated annually using a new evaluation tool. This change in the structure of practice represented new learning for the principals. The principals commented on the new evaluation system by noting they are working to understand this tool at the same time as their teachers and expressed uncertainties about its application in everyday practice. These comments bring to mind Daley's (2000) assertion that the context of practice is important in the application of new knowledge.

Daley (2000) found the relationship of context to practice is especially important given that professionals are not autonomous workers, but instead are considered organizational employees and as such work within a larger organizational system. Daley stated, "In professional practice, the context shapes how professionals look at new information, influencing not only what information professionals seek to learn but also what information they try to incorporate into their professional practice" (Daley, 2000, p. 38).

Unlike the principals in the prior study who learned about leadership research and could wait until the summer to process the BLPD materials, these principals had to process their learning about the new teacher evaluation system immediately after training. Although the principals in the present study were processing a different type of knowledge (i.e., technical versus theoretical) than the prior study principals, their preferences for processing new information were similar. Like the principals in the prior study, these principals also emphasized that they had insufficient time to process and "digest" new learning in the context of state-driven changes. Mr. Lexington commented:

> Well now it's everybody every year. And so we have the new [evaluation] system and with multiple parts to it and again it's as new to me as it is to them. Well it all comes down to trust. You know the trust factor that we'll both learn together.

The challenge for Mr. Washington in being required to implement new learning, the new evaluation tool, without much time to completely comprehend the tool is illustrated below:

> You know I think it's [new evaluation system] going all right; I'm concerned with the current tool we're using. You know its rubric based all under Charlotte Danielson's work, and so I know from a research base that it is solid and that when it says these are the characteristics of a highly effective teacher vs. an effective teacher, I believe that. But there's just so much within that tool that I don't know how I can really do, do an observation for every teacher, three times a year plus a summative under all those criteria. And I think what we're going to have to do is we're going to have to pick & choose I think and make sure that during those observations we're really concentrating on all of them at least once or something like that.

Here in the case of new learning for principals around the state-mandated changes to the teacher evaluation system the ongoing nature of sensemaking was evident. Mr.

Washington and the other principals had to cope the best they could with the new evaluation tool if they wanted to make sense of their environment at the moment.

Mr. Mitchell noted the continuing tensions between the structures of practice and the application of new knowledge:

> I always find it interesting that they say we're research-based [making decisions based on empirical data] but it's funny that research points out that one of the most effective ways of helping teachers is giving them more common planning time. But that ironically is an area because of funding cuts we find ourselves reducing. We just don't have that time and not only that, we're adding more things to the teacher's workload and we're finding less time for them to actually engage in planning time.

This quote provided an example that the present state of practice was different from what the principal would expect given empirical findings from research. Discrepant cues like these that principals extracted from their environment brought about their sensemaking in reflections and conversations.

In addition to considering the structural characteristics of their context, these principals processed new information via a political lens. The principals acknowledged their political landscape, as they reflected on how their new knowledge fits with their present situation by commenting on the internal and external politics in place.

**Consideration of Contextual Politics**

When these principals spoke of politics, they discussed the implications of internal politics within the building, external politics in the community and beyond, the consequences of politics on their leadership practices, and the ensuing frustrations they and their teachers experienced. The present study validated the findings from the prior

study that principals recognize the importance of communication and transparency in managing politics.

Additionally, while the influences of internal and external politics were confirmed by the present study, some new findings related to politics emerged. The principals in the present study added another dimension of internal politics to the picture. These principals used internal politics to their advantage during the implementation of the new initiatives they had learned about. Also the principals in this study, while still mindful of external politics, expressed more frustration with external politics as constraints on their practice. Principals' consideration of contextual politics as they processed new knowledge is illustrated in Figure 6 below.

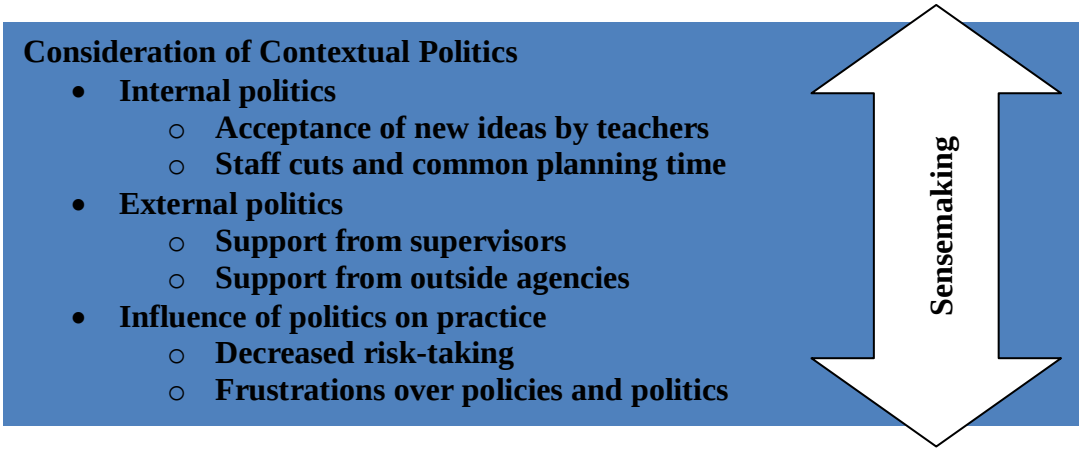


*Figure 6.* Principals' consideration of contextual politics.

**Internal politics.** Mr. Washington used his understanding of his staff and their relationships with each other to facilitate the use of math stations, similar to literacy

stations, introduced as part of a district initiative to increase teachers' differentiation of instruction. He shared:

> Who can I count [on], who do I think I can approach with this to be, to assist me in the leadership amongst the staff for this? Who do I know, not so much my bandwagon type person, I want some of that but I also want someone who has the credibility to give it a shot, hopefully see that success and share it with others. That's an extremely important piece.

Mr. Lexington shared how he used "go to" people on his staff to buffer the deployment of new ideas.

> Of course, you've got go to people. Your key people, your key leaders that you have. And then certain key things, you know you throw that balloon up, run it by a few of them and just see what they do with the balloon. Sometimes initially, it's badoom doom, and then you can run it by some of them, and then usually the process is I will run an idea through the school improvement team.

The principals in the present study also shared their awareness of some potential internal politics issues. Providing common planning time for teachers, a research-based best practice principals learned about in PD, has become more challenging in these schools as a result of staffing cuts. Mr. Lexington explained that staff reductions led to ancillary subject teachers (i.e., Music, Art, PE) being shared by two building. Consequently, on some days, teaching time was cut short, and on other days there was no break from instructional time for students or teachers. He explained:

> What you ended up with was you're bunching because of your shared teachers, you're bunching all those specials [i.e., Music], get crunched up into two or three days. So then you have two or three days where teachers have none. No specials whatsoever and the only break they have is that little bit of recess. But then it was breaking the backs essentially of your specials teacher, you know your art, music & PE people were going from, all right let's see...the first class I had was a 4th grade class and I have a kindergarten class then I have a 3rd grade class.

> So we went back this year to the, what we called the old schedule. It works, I mean it's a lot easier to work and the teachers are much happier with it, they really are. And the special teachers really are much happier with it. The one thing we've lost though is that imbedded during the day common planning time. So the common times we have are only at recess.

As a consequence of less common planning time, districts began to look for other ways for teachers to collaborate. Districts experimented with early release days so professional learning communities of teachers from across the district could meet at the end of the school day. Other districts experimented with late start days to provide principals more time for building-wide staff development. At the same time teachers began to ask for more time to plan and prepare with their grade level colleagues at their school. Whereas previously districts were able to provide monetary compensation when teachers gave of their own time after school or in the summer recent financial downturns in this state made that impossible. Therefore, districts were now expecting teachers to "give of their own time." This expectation created some potential internal political conflicts as Mrs. Hill explained:

> You can definitely tell teachers that are in that 8-15 year range versus 15-25 year range and then the brand new ones. My older ones [more experienced teachers] they're just used to giving, used to coming in after, staying late, that's nothing for them. That's just what we do. People that are younger, my 10-12 year veterans, they're not. They'll be here when the contract, and sometimes I have to remind them what their [contract] start time is, and then they will be leaving right when it's done and if you're expected to work through they're going to be the first ones looking for their comp time, are we getting paid extra, is that in the contract that I have to do that?
>
> Not my brand new people as much and that's why I'm very careful, at least me personally, careful with who you mentor your brand new people with because they're going to learn the policies from them and it's going to become standard practice. So I think it's our job to mold and adjust that a

> little bit and say well this is the expectation. And I talk a lot about professionalism and what's expected and I do that more candidly, not in a whole group, one on one.

Mr. Holland spoke of preparing his staff for changes in teachers' contracts and thereby avoiding the consequences brought on by staff reactions to the rumblings of internal politics. He said:

> So there's been a lot of conversations of, 'when are we going to do this?' and so that was part of the survey as well was getting it out there of when are we going to do this? Not only are we going to take half days, we can take full days we can take summer days, and so are we going to take our own time, are we going to organize ourselves as grade levels, when? And so on like that so that's a big twist. And we're going to have to change that in our new contract. We're going to have to just tell people they are expected to. Even though our people will, there's still a difference.

Principals are also mindful of conducting their practice in light of those staff members within their building who have close connections to external entities. As Mr. Lexington said:

> And you have building politics like I said. You had your key leaders and things and you have district politics, and in any district you have you know administrative lead, teacher wise you have those that seem to have more favor than others so you watch to see those.

Findings from the present study showed that principals were aware of the internal politics at play as they tried to move through these turbulent times of change with new knowledge in hand, such as the importance of providing teachers with planning time. However, often that new knowledge was in the form of new legislative mandates and district policies that must be implemented. Thus, all of the principals also considered the way the external politics surrounding education impacted their practice.

**External politics.** Sources of external politics were the community, including parents, the district and ISD offices, and the state and national arenas. The external politics of the community include a history of strong local control of schools (school boards), strong unions, and parent involvement. These principals seemed more adept at applying new learning with consideration of community politics than some of the other sources of external politics. As the sources of external politics moved farther away from the school itself, principals expressed greater frustrations with the influence of politics on their practice.

External politics emanating from the local district and ISD offices clearly impacted these principals' consideration of changes in their practice. Principals recognized district politics can negatively or positively impact internal politics. For example, Mr. Washington spoke of the importance of having district support when he tried to apply what he has learned in PD.

> I think the big thing is it's coming from the support from the top. It, that's the big thing because, you know, to do some of this stuff, to push that, in this district it's very likely that there's going to be some push back that's going to get to the board members and then it's going to get to the superintendent and then if a principal does not feel like they really, someone really has their back and says what they're doing is the right thing, it's not going to go very far. You know, cause why would someone put their neck on the line. Even though this is what's best for kids. I feel very confident this is what's going to get me, you know, get my kids to the next level, but if you're, you know, if you're thinking you might not have a job tomorrow because of the flack that it's creating.

Mrs. Hill spoke of the need for the superintendent to support the importance of continuing professional growth for principals. She said:

> Providing us with that professional team time to have those conversations like we would with teachers to be able to say, okay, how did you get that,

> what did we do, because we need that support. We need to be able to communicate those weak areas with someone who's stronger at them so I can improve and I can reflect and I can move forward. And again I think it comes back, if you have a strong leader, superintendent that has that vision and focus that can guide his team, I think that would be key. And we're lacking that right now.

Moving to a discussion of politics beyond the district and ISD offices, Mr. Washington spoke of his frustration with the local court system responsible for truancy cases.

> But there's other things that are contributing to the problem that politics is not willing to address. I mean our own county; we can't get a truancy hearing for nothing. I've got kids, elementary kids that are missing 30 days of school. All it takes is either a quick doctor's note or I'm going to home school and it's dropped. So, there's things like that, you know, that go beyond school that are contributing to the challenges that we have that aren't being addressed.

Mr. Lexington's comment below illustrated the impact of state politics, driven by national politics, with the mandated, immediate implementation of the new teacher evaluation system:

> And, so, but we have the new system and with multiple parts to it in and again it's as new to me as it is to them and so, you know, it's a work in progress. I think there were a lot of people who were apprehensive when they were looking at that eval, how is it going to affect me, how is he going to do it but I think again, I think trust is huge you know the ability of the staff to trust their administrator. You know the trust factor that we'll both learn together. It is not a gotcha situation.

**Influence of politics on principals' practices.** The principals in the present study recognized that they operated in a context of political influences on their practice. In response, the principals engaged in sensemaking behaviors to decipher competing and ambiguous cues in their environment and thus, make their world more orderly (Weick et al., 2005). For example, Mr. Holland's reflections demonstrated his efforts to make

retrospective sense of a program at the ISD requiring teachers to spend time out of their classrooms working on curriculum alignment across all school districts in the ISD. Prior to this time, each district within the ISD had the autonomy to develop its own curriculum pacing calendar. This program, driven by state-mandated annual assessments of student learning, was intended to prevent student from having gaps in their instruction should they move from one school district to another within the ISD during the year. Mr. Holland provided some additional background information by saying:

> We've had a change in the ISD Staff and that has really altered…. I'm not sure who you've talked to, but some of the principals have been a little dismayed in the leadership or the manner in which we've moved forward from the ISD.

This expectation that teachers spend their instructional time at the ISD competes with what Mr. Holland called the "routine pieces" of his increased focus on curriculum and instruction: "I see the time on task, and I use maybe the transition piece of going from one activity to another and not to waste time." Additionally, the tension from variations in organizational culture, between his school and the larger ISD his school belongs to, was evident as Mr. Holland continued:

> I do agree with you that if Johnny goes to [name of nearby town] hopefully we're all on the pace that is the same and so on, but yet I am sensing right now I'm more balancing and the sensing that we, [name of his school] has always prided itself on being [name of his school] that doesn't really care about anyone else, and in the past up to this year it's seemed to fit us well.

In addition Mr. Holland was aware that his independence and autonomy was limited by the role of the ISD in developing curriculum designed to meet state standards. The following comment reflected his struggle to maintain his school's identity against the

political pressure of the ISD's efforts to make everybody alike as a collective unit. Mr. Holland disagreed with the ISD expectation that some of his teachers leave their classroom periodically to work on the curriculum alignment project. As a result he made some changes in his practices as he described:

> I think we've had to re-energize and maybe look differently at a purposeful community and it has, I think right now starting to pay off the dividends. A part of it is we've just tried to- I've tried to circle the wagons, not in a negative sense but in the focal sense. So I have to balance both of those and its certainly not going to send a message to my people that we're better than anyone else and we're not going to waste their time with everything because the collaboration piece is so important. But again I don't necessarily see it as a real collaboration piece.

Variations in organizational culture and levels of independence and autonomy are two characteristics of context identified by Daley (2002). These characteristics are relevant to the theme of political considerations affecting the implementation of new learning. Mr. Holland's explanation of the influence of ISD politics on his practice corresponds to Daley's (2000, 2002) finding that the process of knowledge becoming meaningful and useful is tightly connected to the context in which professionals work.

These principal are keenly aware that they must walk a narrow line between being a risk taker willing to try new things and facing the consequences of external pressures from local, state, and national entities. Mr. Lexington shared his decreasing willingness to take risks in his practice:

> A lot of things the district does here that are now imbedded was brought to me, we talked about it, and we said 'let's give it a shot'. You know it can do no more than not work. But over time I'm now becoming more gun-shy of stepping off that fence. Well I used to jump off with both feet you know sometimes thinking it'll be a little wet … If I think it was going to help the teachers and help the kids then let's do it. But with all the other years... So I'm less and less likely to do it...And maybe it's more like a, knife edge or

> something. Now if you fall you don't get off on one side or another, you get cut.

The principals in the present study discussed the impact of organizational politics on their practice similar to the nurses and social workers Daley (2000) studied in her work on CPE. Daley found nurses and social workers are well aware of political issues in their practice and use or screen out new information accordingly. Like the principals in the present study, teachers studied by Daley (2004) also described the impact of internal and external politics on their use of knowledge from PD programs. Internal politics for the teachers included certain coalitions between administrators and their "favorite" teachers and variations in the allocation of resources. External politics resulted in teachers feeling overwhelmed by constant reforms and frustrated by not having any input into the development or implementation of reforms. Similarly, the principals in the present study considered the internal and external political risks involved when considering new ideas as well as implementing new initiatives.

**Frustrations over policies and politics.** Like Mr. Lexington who suggested that there are many agendas at play behind the recent changes in education affecting staff identity and morale, other principals also expressed frustration with the reasoning behind policies. For example, a funding policy as described below by Mr. Mitchell clashed with a core value shared by the principal and teachers, small class sizes.

> And see we're having a little bit of a problem there because they don't know, is the new guy here going to allow us to reduce class sizes as much as I want? Okay I think it's very valuable. They think there are other ways and I said, you know if I take that half a million dollars I get from Title [Title I] and I can't use a lot of it, or 80% of it for reduced class size, then you know that means I'm going to have class sizes of 30 or even more. We could have up to 40. Two years ago I had [name of person], last year I had

> somebody who was a temporary, and I have a new guy this year, so I got three different people. And we have three different interpretations...And if you talk to people involved in Title program a lot of it is interpretation and how they wish to interpret it. Okay I want to interpret it loosely so I can use- put the money where it's going to do the most good. For me, that's personnel. That's what I told the new guy, please come over and take a look at our school. You'll see what, the money that we're using from Title I, it is working. Now you can theoretically say that reduced class size doesn't work as well as other things, but come to our school and you'll see that it does. He seems like a nice guy, but again he's coming in and I'm not blaming this on the state people because they've been audited. [Name of state]'s been audited by the national government, so it all flows down. So basically if these, if they've been audited, they've had their hands slapped…

Daley (2001) found the more traditional and bureaucratic the organization was, the more likely politics would influence the use of learning. For example, the lawyers Daley studied worked in a more autonomous capacity whether they worked for a large or small firm and there was very little influence of a corporate structure on their context of practice. The opposite was true for social workers employed by a government agency or nurses working in a bureaucratic health care system. Likewise, most schools remain a part of larger bureaucratic and traditional organizations. Several principals spoke about the influences emanating from decisions at the larger organizational level. Mr. Lexington's comment provided an example:

> We closed an elementary school and that had a big effect because the three remaining in-town elementaries absorbed that population. So of course you had parents who were, you know, less than enthused about their building going away. What the biggest problem they had with it was the quickness in which the decision was made and it was, like I said, I alluded to earlier, it was done very rapidly. You know, here's an idea, let's go for it. The administration said it makes sense. You know, and the decision was made let's jump in the water and let's go. And, of course, with that you had the displacement of not only the students, but you had staff displaced, you know grade level realignments. Which like here I believe almost half of my staff was effected in one way or another. Either

> changing grades, changing rooms, or both. Changing rooms can be a big enough deal for somebody, but changing rooms and grades at the same time sometimes doesn't make you the most popular person around. Uh, layoffs, there were layoffs in the district, you know, coinciding with some of these things and so there was a lot of stuff going on.

The political considerations reported by these principals validated that the acquisition and application of knowledge is shaped by the characteristics of the context. For example, when Mr. Lexington was asked what new knowledge related to curriculum and instruction was being presented by the district he replied, "Not much. Because of the vast amount of changes we had of building realignments." Concerning both the acquisition and application of knowledge about changes in the math curriculum, Mr. Washington expressed concern for his lack of understanding of the new Common Core standards:

> Well most of my knowledge is coming just from my own reading and investigation. However our elementary, middle school curriculum person, she's brought updates to us. The ISD has kind of broached some of the roll outs and things like that, but I just, I'm not, just not sure it's been a real effective way of trying to deliver that information. You know, I know personally as far as on the understanding of how the curriculum is-- the core standards are flowing and I'm feeling a need to really, truly understand cause I don't think, in fact I'm certain, I don't really understand how the changes are going to effect the scope and sequence in the classroom. I'm not sure the degree of rigor of these standards. I don't think any of us have a good, firm understanding of that. So when I'm in a classroom, it's hard for me to assess whether or not this teacher's on track to get these kids ready when I don't really know what it means to meet the standard and neither does the teacher. We're kind of guessing. And that's how I'm feeling right now. And that, that's unsettling.

Thus, local, state, and national politics have limited knowledge acquisition and application while creating tensions, frustrations, and lower morale in these schools. In addition, as principals considered applying new learning whether it was from leadership

seminars or mandated changes, they were keenly aware of navigating the political forces in their context of practice. In addition to viewing new knowledge through a lens of contextual structures and politics, principals also talked extensively about the relational aspect of their leadership. As in the prior study, findings from the present study revealed that the application of knowledge was shaped by who is in the context of the principals' practice.

**Consideration of Human Relations**

Principals in both the prior study and the present study spoke extensively about the importance of their relationships with their teachers and parents. The value they placed on these relationships guided their interactions with all school constituents: staff and parents.

In the present study, principals spoke of showing consideration for their teachers and parents in several ways as they contemplated applying new knowledge and information in practice. The ways in which principals demonstrate their consideration for human relations is depicted in Figure 7 below. As a part of their consideration for human relations, principals continued to be engaged in sensemaking as they reflected on their practice. In addition, like in the prior study, these principals also began to show evidence of phronesis as they contemplated the application of their learning.

Halverson (2004) noted knowing how to apply general principles from theory and research given the idiosyncrasies of a particular context represents a unique, and perhaps underexplored, domain of leadership knowledge he interprets as phronesis, or practical wisdom. Halverson proposed phronesis provided an executive function helping the

school leader decide which theories and techniques were appropriate to use and what the important consequences of certain actions might be.

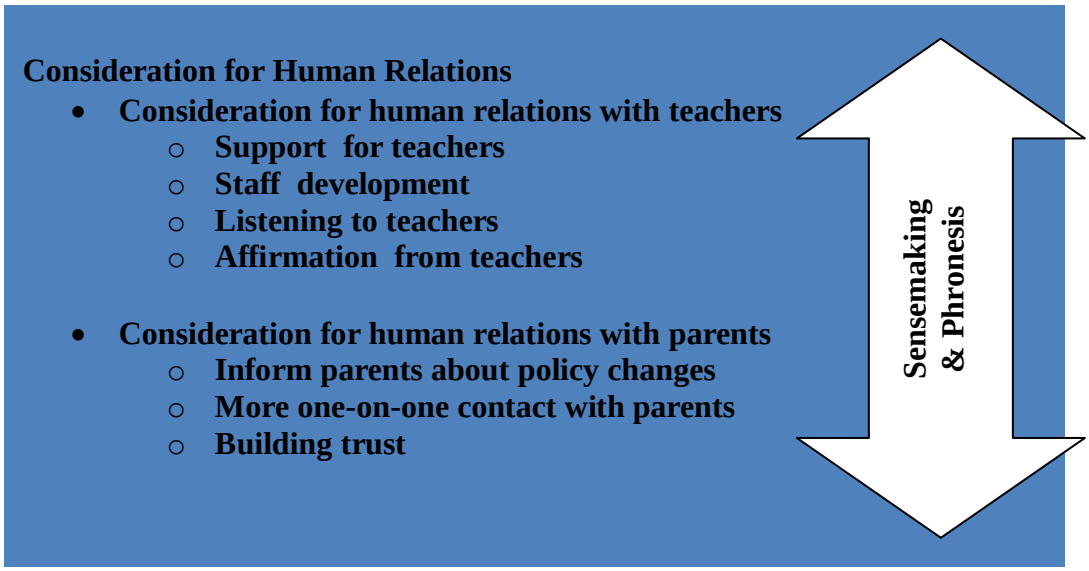


*Figure 7.* Principals' consideration of human relations.

**Consideration of human relations with teachers.** First, principals considered whether or not new ideas or programs would help teachers. A principal defined helping teachers as making them more effective and making their job easier. Mr. Lexington said, "The stuff we're going to do is it going to make them more effective teacher? How much time is it going to take? Will it make their job any easier? If you can put those three things together, bingo."

Second, principals spoke of providing support for their teachers when new programs were implemented. Mr. Holland said he reminded teachers to keep new mandates from "being bigger than they need to be." Another way principals supported

teachers was by encouraging them to try new practices and share their experiences with each other. These principals were also respectful of the time, often personal time, teachers gave to implementing new district initiatives. Mr. Washington commented, "I'm spending an arm and a leg on lamination. Because they don't want to put all that work in and then have it ripped the first time. I understand that." Mrs. Hill spoke of the importance of administrators showing their support for teachers by understanding what teachers are being asked to do. She said:

> As far as the support issue, that is a human relation. That one is definitely making sure that staff feels supported. And making sure they feel that administrator is understanding what it is we're asking them to do so if we don't provide our administrators with PD, on what it is the staff is doing then how can they be supportive?

Mr. Holland spoke about how he understood that implementing the Delta Math program would be a lot of work for the teachers and how he showed his support for them. He said, "From what some of the principals said it was a lot of work. So that was a biggy for me and I give the tests in the computer lab with the kids." The principal's support along with initial buy-in from the staff about the Delta Math program, led to the staff taking responsibility for solving other problems associated with its implementation:

> And then it's wonderful how the teachers themselves have taken, because it makes intervention groups, they've taken upon themselves, they get that information, they do their intervention groups. A year ago and two years, we tried before we had delta math; we tried to have intervention times. We don't even do that now. And that's mainly because of the 90 [minute Language Arts block] and 60 [minute Math block] we're so committed to that. The teachers said we don't know how we're even going to do delta math. The next day they turned around and said, "You know what here's how we're going to do it."

Mr. Holland also supported his teachers by taking a team approach with his teachers when looking for solutions to weaknesses in a particular subject. He explained:

> But they're willing to risk because they know if I say to them, let's try this here or the reasons why, or you help me do the research piece, you know if we get on What Works Clearinghouse or we talk to people, so on, and they just take off and do it.

Finally, principals supported their teachers not only by demonstrating their openness to change, but also being mindful of the importance of not having so many changes in one year or year after year. Mr. Washington noted, "You're never taking anything off their plate, ever." Mrs. Hill whose school had gone through a major reconfiguration, staffing changes, schedule and calendar changes, and building remodeling explained her sensitivity to the influence of constant changes on her staff. She said:

> I don't want to do major changes because that would be 3 years in a row for this building so I'd like to ease in. I don't want to be one of these that I'm flipping every year because we don't think it works. You have to give it time to be able to see although I'm not going to sit here and say that I'm digging my heels in and that I'm not willing to change if I feel that that's not what we know is working.

In addition to supporting teachers' efforts to implement initiatives and mandates, principals also encouraged teachers' to participate in PD. Mrs. Hill shared how she not only encourages teachers to attend staff development but also provides staff development as a part of staff meetings. She presented staff development as a consequence of her observations during classroom visits when she noticed student engagement was low.

> So I have worked with a staff member from the ISD on developing a very, thoughtful, from February to May, staff meeting roll out on how to

> improve student engagement. So through my staff meetings, like the first one was modeling lesson, all my staff meetings now are totally modeled after lesson of review, introduce, guided practice... Transition times, introduction times, things like that. So when we left, after modeling some closure informative assessments, they left with exit cards, and it was interesting to see what they wrote and then we reflected back. So in the next staff meeting we reflected back on what is our growth.

A shift in the degree of principals' involvement in the staff development of their teachers was evident during the present study in comparison to the prior study. Previously principals left the planning and providing of staff development solely to outside agencies such as the ISD. They also relied on teachers to attend staff development and then share their learning with their colleagues formally or informally. Several principals in present study spoke of participating in professional growth along with their teachers by learning the new evaluation system, learning about the Common Core Math standards, or researching new programs together. As an example, Mr. Holland spoke about his more direct involvement in learning new programs and strategies alongside his teachers. He said:

> I guess I've upped my ability to articulate Everyday Math. You know I couldn't stand here in front of you and do Reading Cafe to you, but that's my intent. I'm trying to stay, ahead or at least equal with the teachers, but if I'm going to ask them to do something, even though I say to them be a risk taker, I also want them to know I'm there with them and I'm trying to, I may not teach, but I'm doing the work to learn. I really think that's important because we need to be together on it.

Principals were also keenly aware of the importance of listening to their staff. In this way they were affirming their teachers' identities as professionals. They listened to their staff for two reasons: (a) to get input from the teachers, and (b) to know what their teachers were "ready for." Principals sought input from teachers in many ways. First,

several principals reported surveying their staff for input. Second, principals adapted expectations for teachers to make changes in their classroom practices based on individual teacher's readiness.

Mr. Holland surveyed his staff to "help refocus and articulate what PD best fits our needs." He said, "We have this theme of data, depth, and differentiated instruction." Mr. Mitchell explained the value he placed on surveying his staff:

> I survey my staff. I surveyed my students every year when I was a teacher and I survey my staff every year when I'm an administrator. I mean, how would you not? They will tell you what they think. They don't hold back and I appreciate that. Different types of training, you know. If the staff buys into it and if the kids buy into it, then it works. If, and I think that's one of the problems is that we can take this thing, plant it over here, and it's going to work automatically. Well, you need to have staff buy in.

Mrs. Hill surveyed her staff to plan for teaching assignments by asking her teachers to tell her what they love to teach. By assigning her fifth- and sixth-grade teachers to teach the content they were passionate about, she could have an effect on improving student learning. She explained:

> When I look at scheduling and how I'm going to set it up it's also looking at an option of where teacher's passion are, I always ask them 'what do you love to teach?', what's your favorite subject? I can see specifically if I have observed something that's not their passion, I notice it. They don't have depth of knowledge. If kids are asking questions they don't answer it in a way that I can see that depth. That's going to be probably the movement to be able to increase scores and I think we'll just get more- if I'm teaching what I'm passionate about I can get that depth of knowledge. So that's going to be another goal. I always ask what's your passion, where do you feel your strengths are, what would you like to do, and it's really made a difference.

In addition to seeking input from their teachers, principals listened in order to know what their teachers were "ready for." Mr. Holland spoke of needing to find a

balance between giving teachers time to digest new information and the urgency to implement new knowledge or new programs. He said:

> The only thing you had to be cautious about was to tackle or present too many of them [new initiatives] at a time. So people are, more sensitive to letting everyone digest. And yet just like the classroom not taking too much time because we don't have it.

Also, several principals spoke of the importance of understanding differences in teachers in their acceptance of new programs and being flexible with teachers around the implementation of these initiatives. Mrs. Hill shared:

> I think that human relations side is just recognizing that they're all on different levels, all on different performance. So whether that's the same label so to speak, but that's something that's very important when you're presenting that information that obviously they have very different background knowledge, very different levels of acceptance of new material, that filter is pretty important. Whenever I do any planning I make sure I target- because I can go, like I said, through my walk throughs, my observations and through data meetings and I've had personal conversations that I've shared with staff that helped them through their transitions.

Mr. Washington, talking about district mandated changes in the math curriculum to realign it to the Common Core, explained his flexible approach with his teachers:

> I have had to give people the permission to experiment and to go almost at their own, or close to their own pace so that they're comfort level is okay because that is definitely second order change for those folks. And they need to be able to be given that ownership and control over their own destiny. Even though in reality that's the job, we have to do that, but that's an example of where we've had to tweak you know, we're supposed to do it exactly by this platform, but kind of like you if you don't tell anybody, you know what I'm saying? Let's let you do it this way. If you're more comfortable doing it with, making sure the standards are there but maybe not exactly implementing this particular program at this point, okay but I want you to work towards that. Or instead of having 5 differentiated math stations going on in your classroom at this point of the year, which is what I would expect to see at this point in the year, it scares you a little bit, you're not as comfortable -two. You know those types of things.

Each of the principals in the present study shared ways in which they applied new knowledge or mandates in practice with consideration for the importance of human relations. In doing so some offered evidence that their efforts to make sense of new stimuli in the environment (i.e., mandated initiatives) were grounded in their identity as a principal. Some stated that they were relational people; others acknowledged they considered themselves a data person. For example, Mr. Lexington offered his strength as being about relationships. He said, "Most of it is handling staff. Is learning how to handle people and read them." Other principals recognized their leadership style was based more on a data-centered approach. Mr. Washington said, "Sharing with people the facts: 'This is what the data says,'-- okay? -- that's number one."

These principals' expressions of who they are as they work to understand new knowledge in the form of mandated initiatives represents the identity construction that Weick (1995, 2009) finds as one of the basic properties of sensemaking. According to Weick (2009), our sense of self, or our identity as an organizational figure shapes how we think and act. Likewise, others' perceptions of us are based on how we think and act. Those perceptions determine what others think of us, their image of us, and how they treat us. As a consequence, the way others see us and treat us then stabilizes or destabilizes our identity. Weick offered that individuals attempt to make sense of ambiguous stimuli in ways that respond to their own identity needs.

Therefore, in addition to principals' expressions of concern for relationship with their teachers, principals' concern for human relations was also motivated by their own need for affirmation of their identity. It was important to these principals to show their

trust in their teachers and for them to know their teachers trusted them. Principals valued their teachers' trust in them. As Mr. Lexington commented, "I don' know what it's like in other buildings but I think they trust me to do right by them. I think trust is huge you know the ability of the staff to trust their administrator."

All expressed a hope that their teachers were comfortable coming into the principal's office to air concerns. All principals spoke about their door always being open as in the following quote from Mr. Lexington:

> I always tell them that my doors are open, this is a shortcut on the corner you know, that type of thing. And so, you know, I think they feel pretty comfortable if they need something or have a concern that they can come to me. And if they have a complaint, you know, come in, close the door and air it. You know, air it out; you know we can have it out if that's what is necessary.

As these principals talked about the importance of their relations with their teachers, they noted that by having good staff relationships they could build the right culture in their schools. Mr. Holland shared, "But I take great pride in hiring what I think is to develop the right culture. Cause I know I won't be here forever." Mrs. Hill spoke of building relationships with her staff as a particularly important focus at this time because as a new principal to this school, her leadership style was very different from that of the previous principal.

> A lot of it is building culture. You know there's a couple of the administrators that I've followed have been very social people and so that's, and I said, it's not like I'm not social, but that's what they do is just have cookies and coffee with the staff and talk about whatever. During the lunch room a lot of administrators will be out in the playground and do that type of supervision and I'd like to be there cause I can see the kids, however at the same point that's a great opportunity for me to meet with staff. So I try to meet informally with staff at that point. They know that

> they can come to me. They see, you know, like I said I'm just, we can talk informally. So it's kind of a more relaxed atmosphere. So that's been a time where I feel, so I try to balance between the two of getting in and out of the cafeteria, making a presence known as well as availability to the staff.

These principals' considerations for human relations with their teachers were indicative of Daley's (2000) model showing that the particular professional practice and its context were linked together and as such influenced professionals' thinking, feeling, and acting on new knowledge.

**Consideration of human relations with parents.** In addition to concerns for human relations with their teachers, principals spoke extensively about the importance of their relationships with the larger school community, in particular parents. These principals recognized the importance of good relations with parents by making efforts to communicate frequently and openly with parents. While principals in the prior study spoke generally about their parent communication efforts, the principals in the present study all spoke in more detail about sharing new information with parents and listening to parents both collectively and individually.

Specifically, in addition to written communication, the principals in the present study emphasized the importance of personal contact with parents as new initiatives were implemented in their schools. Some of the new initiatives principals highlighted as being important in their communication and good relations with parents were anti-bullying legislation and changes in the "cut scores," or passing rates, on the state assessment test. Mr. Holland noted, regarding the change in "cut scores" that he needed to continually

communicate with parents in order to educate them about the changed expectations for students' attainment of subject proficiency. He elaborated:

> So although it's a shock that it's happening, I think we're going to be in the mode now of, as I told school improvement, we need to use our blogs; we need to use our newsletters; we need to use anything we can. We need to get to our parents to let them know that this is what's happening. And do it now and continually do it to educate them. And yeah I didn't have one phone call from up here. So I'm really on - I use my blog for parents and we got it out there and we said this is what's coming.

When asked if he thought there was a lot of trust in the community for the school, he replied, "Yeah I think they have a lot of trust in our people. Um, and I really want people to work hard at building that, you know."

Mrs. Hill spoke about the time she spent working with parents and their children to understand the school's responsibilities under new anti-bullying laws. This quote illustrated the amount of time she, like others in the study, dedicated to building good relationships with parents and educating them at the same time. She said:

> Like we had a situation this fall, the counselor did take care of. There was an issue about graffiti or something and we talked and then she contacted, evidently that wasn't enough so that parent went to a friend who went to our Act Now which is our bully prevention parent group, they're kind of a politically charged pressuring group, went to the Act Now group which went to the superintendent which said that that parent was never contacted by me personally therefore I wasn't doing my job. But they never came to me and said 'hey, what happened?' and the counselor had taken care of it. So now it's really tripled or quadrupled the work load. So any time I have parents coming to talk I always have the student present and I say I know that [bullying] hurts, and I know that it's mean, and I understand that, but I need you to stand up or it's going to keep happening. Because I can't always be there. The bus driver can't turn around. So I try to give them skills and the parent skills of how so I do it in front of the parents so they're aware of that language so they can hopefully carry it forward.

In addition to helping parents understand new legislated information relevant to their child's success in school, principals were keenly aware of the importance of good relations with parents in these times of continuous school district budget cutbacks. Mr. Mitchell demonstrated the value he placed on good community relations in his decision to take a cut in his salary. He said:

> We're being hit, serious, real serious issues with funding, huge. Those were the big challenges right now. Trying to balance books and our staff has been very well-- absolutely wonderful. We've been able to avoid privatizing our staff because the entire staff is basically willing to take a cut to help everybody. So it's kind of like we're all in this together and that's my approach is that, you know, this past year for instance and I'm not ringing my own bell, but just as an example and I did this because I felt that you lead by example, but I retired, came back and I'm only getting a third of what I was paid. It saved the school roughly about $90,000. In terms of absolute dollars it's costing me about $20,000, but I know the community I live in, I know the hits that my people are taking. I know my bus drivers, what they're making and what my para-pros are making. It's pretty difficult for me to say, oh I'm exempt. When I'm asking everybody else to make a sacrifice.

Through this action Mr. Mitchell was also exemplifying the role of phronesis, or practical wisdom, in leadership decisions. According to Aristotle (1941), phronesis is a form of moral knowledge, which he also called a "phronetic eye." Aristotle suggested that leaders use their phronetic eye to recognize situations worthy of action for the good of the community. Leaders must balance their own personal good with the good of their community. However, Halverson (2004) also suggested that this does not imply there must be a trade-off between personal and political phronesis because it is the personal values and commitment of school leaders that shape their actions taken for the good of the school community.

Mr. Mitchell portrayed his phronetic eye when he spoke of the constraints, or "the hits," that his employees and community members are taking and thus made a budgetary decision affecting his own salary when he said, "It's pretty difficult for me to say, oh I'm exempt. When I'm asking everybody else to make a sacrifice." This comment supported the school's culture of shared sacrifice that Mr. Mitchell spoke of often when describing efforts to maintain financial viability.

Principals spoke of another effort related to culture, building a culture of trust with parents. For example, in the case of the district where an elementary school was closed Mr. Washington said, "That really has been my focus of the culture building. You know trying to get, trying to help the new people feel comfortable here cause a lot of them came not wanting to—." Acknowledging the relationships with the new parents that needed to be cultivated, Mr. Lexington said, "So of course you had parents who were, you know, less than enthused about their building going away."

For Mr. Mitchell the combination of budget shortfalls and consequences of state accountability measures made building a relationship of trust with the community his priority. He said:

> Right now the biggest issues we have right now are A. our financial and B. would be building trust. I think we're working very hard, but our high school is on the persistently low achieving list last year. I became superintendent in July and in August got the news that we were on the PLA [persistently low achieving] list. So we were on this and that was the biggest challenge last year I came in here and that was a challenge. I had to, we had to get off that list, which we did and we had to rebuild community trust.

Building and maintaining good relations with parents for the principals in the present study included more one-on-one personal contact with parents by principals. Mr. Washington described his approach to dealing with particular parent concerns as follows:

> What can I do today that can let you know, mom, that I've heard you, that I understand where you're coming from and I want to fix the way you're feeling. So it's that personal contact that's the biggest thing. And with so many kids being displaced and brought here [due to school closure], 99% of the issues that were going to come up are not academically and structurally related. It was all personal related type stuff and so that was really the big thing and trying to address it.

Whether working with an individual parent to best meet a student's needs, meeting with groups of parents to make them feel welcome in the school, or sending out information via newsletters and blogs, all of the principals in the present study recognized the importance of good relations with parents during times of changes in curriculum, assessment, and policies.

Thus, the concerns for human relations among these principals were about more than making sure teachers were happy or monthly parent newsletters went home. Having positive human relations with teachers and parents was part of the building of a culture of trust with a focus on better meeting the needs of their students. This finding was supported by Daley's (2001) study of continuing education in four professions. Daley found that knowledge application was influenced by the professionals' perceptions of the nature of their work. The social workers Daley (2001) studied saw themselves as advocates for their clients. Lawyers saw themselves as responsible for gaining updated information on the law to assist their clients. Nurses linked new information with providing better care for their clients. Adult educators found new knowledge useful when

they could use it to add to programs in place and when it affirmed what they already knew.

As the principals in the present study considered the human relations aspect of their context, they perceived the nature of their work with teachers and parents to be centered on advocacy and caring. Advocacy for Mr. Washington meant seeking an assistive technology device for a student. Advocacy for another principal meant considering new initiatives in light of making teacher's jobs easier. Caring was demonstrated by the Mrs. Hill in her conference with a parent and student about the intent of the anti-bullying law. Caring by another principal meant finding funds for the lamination and storage of math literacy center materials teachers had spent hours of their own time making as part of a district program. Thus, for all these principals like the different professionals Daley (2001) studied, the process of assimilating new information into practice in their schools was framed by their beliefs about the nature of their profession and their experiences with their teachers and parents.

In conclusion, Mr. Lexington summarized the influence of his practical context on the use of new learning by saying, "As you read about what constitutes a best practice, you are sitting there going, well, is it replicable? Replicable out in our building out in the hinterlands?" These principals considered many of the same contextual factors as principals in the prior study when deciding if something was replicable in their practices. However, the principals in the present study also described additional contextual considerations. These new findings are presented next.

## Additional Contextual Considerations

The intent of the present study was to build on prior research. Therefore, the researcher probed further into principals' considerations of the supports and constraints in their context that might influence their use of new learning. After asking principals in the present study to comment on the contextual considerations that emerged from the prior research, these principals were asked "What terms or labels would you give to the thought processes that go through your mind when you receive new knowledge in a PD session that influences whether or not you take that new knowledge back to your school?"

The additional contextual considerations identified by these principals included the time involved to implement new initiatives, the coherence of new initiatives with existing initiatives, and the overarching influence of budgetary realities. For example, Mr. Washington considered the time required by teachers to learn a new program and, if needed, prepare materials for it. In addition, he spoke extensively about the time required of him to monitor new initiatives. He said, "When am I going to make sure I take the time to make sure it's being done so I can give the folks an 'atta boys' or I've seen you've changed that procedure. You know that kind of thing." He gave as an example, the implementation of a new program for mathematics computational fluency:

> So we spent a lot of time and effort training teachers on how to implement the program correctly. Spent all that time in doing that and getting it ready and getting people on board and they're feeling pretty good about it and then I found myself not concentrating, not really paying attention to that component unless I happened to do a walk through and it [math activity] was being done right there. Because now I'm on a budget issue or I'm looking deeper within the strands in mathematics. Bringing these things in that are research based and supposed to have a positive effect on student

> achievement…and it's like I take it to a certain point and then I have to run over and do another thing.

Mr. Washington also shared how time constraints caused him to not use something he had learned about in a PD session. He explained: "I thought was a great tool, but it's become impossible to maintain. Because I don't feel that I can maintain my focus on that. If that was the only thing I was needing to do, I could probably do that." Mr. Washington also had expressed concerns about the impact of time constraints on his use of the teacher evaluation tool even though he was convinced of its validity. He said, "But there's just so much within that tool that I don't know how I can really do, do an observation for every teacher, three times a year plus a plus a summative under all those criteria."

The principals were also concerned about program coherence. They contemplated whether a new program would replace or supplement an existing program. Mr. Washington pointed out, "We never take anything off their [teachers] plate." Likewise, Mr. Mitchell also evaluated whether or not current programs were working well before adopting something new. He sought program coherence when he considered whether something new fits with the priorities of the school improvement team. He elaborated:

> Learn to use the stuff that you have and then we'll move on. And there are so many things coming in right now that are required by the state, yes this is a great ideas but this is what we, this is our planning right now. Is it going to help us? Does it fit with where we're going? We prioritize and see how it [a new idea] is going to fit in with our plan.

Mr. Lexington also judged new knowledge in light of the existing school goals and teachers' time. He said:

> First and foremost what is it going to do to help kids? Is it going to help improve student performance? And then second, what is it going to take on the part of the teacher? Because it seems like anymore, principals' plates they don't take anything off, same with the teacher.

In addition to considering time demands and program coherence principals were also very focused on budgetary realities. It was not surprising fiscal capability to adopt new ideas was mentioned often given the economic downturn in this state each of these principals has experienced. While the various contextual considerations were woven together as principals considered the use of new knowledge, it was clear state and local economic conditions drove budgets and budgets affected principals' decisions.

When asked to talk about the thoughts that went through his mind when he learned about new instructional strategies, Mr. Washington said:

> One of those things that I'm thinking when we go to a professional development or I ask teachers to go to professional development is will I be able to financially support this initiative or this program or this effort, but also to give up that staff time during the school day for them to go get- they need to get the training.

Giving up staff time during the day for teachers to receive training on new programs included a financial cost as substitute teachers must be hired to supervise students. The tension between expectations that schools adopt new programs and the budget constraints districts placed on principals influenced Mr. Washington's consideration of new information.

Later, Mr. Washington elaborated on his budgetary concerns by explaining that budgetary constraints also affected the sustainability of new ideas:

> Do we have the fiscal capability to sustain this program? Is there a fee involved, is there a re-occurring fee? Are there consumable materials? Boy, my teachers are doing math work stations as a part of our

> differentiated and individualized learning for mathematics. Well, it's more than just creating a game it's also making sure they have something to store the game in so they don't have to re-do it three times or I don't have to...I'm spending an arm and a leg on lamination. Because they don't want to put all that work in and then have it ripped the first time. I understand that.

Likewise, Mr. Lexington said, "How does it help kids, what is it going to do to teachers and how much is it going to cost?" Mr. Mitchell said:

> Everyone says we've got to do what's best for kids and I say no, we have to do what's best for kids in the context of the budget. I mean there are all kinds of things we can do but we have to look at the budgetary considerations and say, it's a balancing act.

Mrs. Hill summarized the dominant influence of budget realities when considering new ideas by saying:

> I'd love to be able to say oh, look at what's best for kids and the scores and that's what we'll do but unfortunately my budget's going to drive some of it because we're still looking at a $1.5 million deficit in the district next year.

Finally, what also became clear from the present study was that the principals did not consider the use of new knowledge in their practice through separate lens of structures, politics, and human relations. Rather these considerations all blended together. Time to implement and monitor new programs, coherence with existing goals and programs, finding "go-to" and credible people on the staff to assist with buy-in for new ideas, and knowing the readiness of individual teachers to adopt new ideas were all equally important considerations for these principals. Time and program coherence represented structural considerations. Finding the right people to assist with new ideas suggested a political consideration. Managing the differential rates of acceptance of change by teachers illustrated a concern for human relations. As Mr. Holland

summarized, “They [different considerations] fall into different places during different parts of the journey of the process or issue at hand.”

The process of principals’ contextualization of new knowledge as described here was a process of sensemaking. Sensemaking guided principals’ thinking about new information particularly during these times of economic constraints and increasing accountability. As principals talked about the possible use of new information against the backdrop of challenges, they were looking for ways to get around discrepant cues and resume normal action. Weick et al. (2005) proposed that “sensemaking involves turning circumstances into a situation that is comprehended explicitly in words and that serves as a springboard into action” (p. 409). While sensemaking remained ongoing for these principals, the next section will focus on the role of phronesis in guiding the actions of these school leaders. According to Halverson (2004) it is the concept of phronesis that guides school leaders as they take action applying new learning amid the contextual details of their schools. Findings demonstrating the principals’ application of new learning are represented in Figure 8 and are presented next.

## Application of Professional Development Knowledge

In her work, Daley (2000) challenged CPE providers by asking, “But what do we, as CPE providers, really know about how participants learn to use new information” (p. 33). Daley proposed that those who plan for CPE must connect program content to the practice and the particular context of practice. Additionally, Daley asserted that CPE providers must plan for methods that guide professionals to link the content of CPE to their profession and their work environment.

Similarly, learning how principals acquire and contextualize new knowledge is informative for the development and design of PD for principals. Additionally, of concern to those who ask to what extent current PD is helping principals become more effective leaders is the question of whether or not principals use new knowledge gained from PD experiences in practice, and if so how do they use that knowledge.

Three subthemes related to the application of PD learning were identified in the prior research and confirmed in the present study. These three subthemes are (a) principals demonstrate a deeper understanding of some current practices; (b) principals take action showing that they think differently about some of their practices; and (c) principals do utilize some new knowledge in their practice.

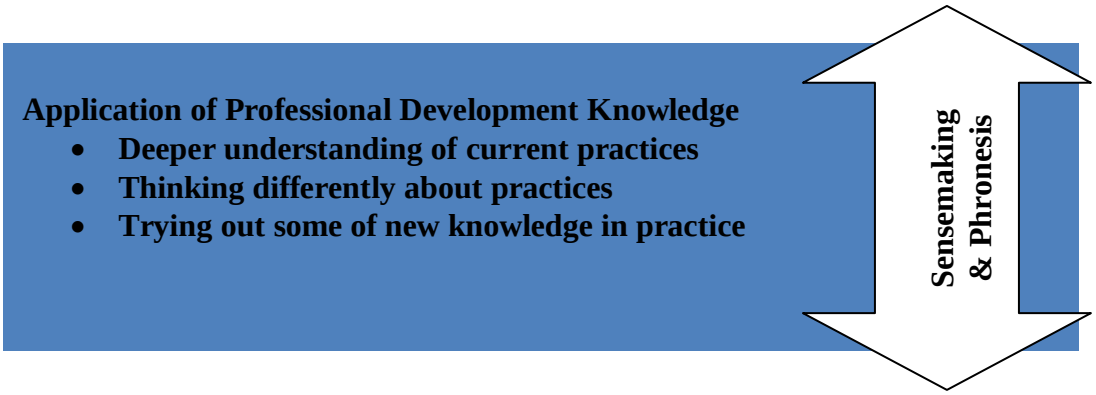


*Figure 8.* Principals' application of professional development knowledge.

These findings from the prior study were validated by the present study's findings. First, the principals demonstrated a deeper understanding of their current practices by sharing their awareness of their own strengths and weaknesses. Some were more likely to turn to colleagues for advice in an area they realized was not their strength.

Others took specific actions to improve in their identified weak areas. Second, principals thought about their practices differently and as a consequence made some changes in some of their practices. For example, several principals' comments showed an increased focus on their responsibilities related to curriculum and instruction. Thirdly, principals did report trying some new strategies gained from PD in practice. The new learning employed most by principals was what they believed would facilitate school improvement efforts already in place and support their teachers.

**A Deeper Understanding of Current Practices**

Like the principals in the prior study who responded enthusiastically to new learning that affirmed their leadership practices, so did the principals in the present study. Given the turbulent times of changes in education in this state brought on by increasing accountability expectations along with severe economic downturns in this state, it was not surprising that principals latched onto affirmations. As previously noted, identity is one of the basic properties of sensemaking. In fact, Weick et al. (2005) suggested that finding understandings amidst ambiguity, sense giving, may affect the sense maker as much as the rest of the organization. They stated, "It is clear that the stakes in sensemaking are high when issues of identity are involved" (p. 416).

Currently, principals were not feeling valued by others. Mr. Washington explained:

> The scrutiny is being, it feels like the focus of the demise of the state is pointed in one direction. That's the way it feels. Meaning it's all education's fault. We don't have the workforce. We don't and it's all the school's fault. And so that's the way it feels, at least for me and I believe there's colleagues of mine that are feeling the same way. So it's kind of

> hard to remain positive when you feel like you're being kicked all the time.

Mr. Washington continued, expressing his own affirmation for educators:

> I still think our profession's a very noble profession and I truly believe that public education still is the best option for the vast majority of our kids. There are things that we've gotten into a rut of doing that we need to get out of, there's no doubt about that. But there's other things that are contributing to the problem that politics is not willing to address. I mean our own county; we can't get a truancy hearing for nothing. I've got kids, elementary kids that are missing 30 days of school.

Like the principals in the prior study, the principals in the present study also valued new knowledge that gave them a deeper understanding of their practices, both those they recognized as their strengths and those they acknowledged they needed to improve. These principals shared that time for self-reflection on action led them to recognize skills they needed to improve. Mr. Lexington described the results of his self-reflection as "the recognition of the practices out there that you don't have or you need to sharpen yourself on." Echoing similar thoughts from self-reflection, Mr. Washington said:

> I think the [BLPD] training allowed me that knowledge to say, ok you have strengths and you have weaknesses and I've come to grips with that. When a decision or a procedure or something like that comes through that I know, ok this is a challenge for me, it's [the training]given me some tools of this is what this behavior looks like, you've got to step it up here.

For example, Mr. Holland talked about gaining a deeper understanding of the importance of his strengths and weaknesses from the BLPD training. Speaking about the responsibility for involvement in curriculum, instruction, and assessment he said, "Oh, that's always bothered me. I've never been strong there. You know, how to read people on the situation awareness, communication, getting along with people, that's my strength.

My strength has not been curriculum." Mr. Holland added that he was also focused on increasing his strength in providing intellectual stimulation for his teachers and maintaining a sense of order during the many changes currently taking place in education in his state.

These comments demonstrated some of the self-examinations and critical reflections principals engaged in after PD learning. In addition to gaining a deeper understanding of their current leadership practices, principals also reported thinking differently about some of their practices as a consequence of PD experiences.

**Thinking Differently about Leadership Practices**

Findings from the present study confirmed what emerged in the prior study, that through their reflections on learning, principals began to think differently about their practices. Principals in the present study also demonstrated thinking differently as they shared adjustments they had made to their practices. For example, demonstrating how self-reflection led to decisions about making adjustments to her practice, Mrs. Hill shared:

> So of course I do a lot of self-reflection kind of on a daily or weekly basis. How can I, what can I do to improve certain areas that I see myself as weaknesses or as I have conversations with staff, I can exclusively poll areas to improve. I think that from all of the PD, it's almost as with teaching too, it's being able to prioritize what you're going to be able to work on.

By this comment Mrs. Hill showed how her phronesis guided her problem solving. She assimilated new knowledge from PD with her perceptions and those of her staff through surveys. She made judgments about what to work on. Choice and planning took place as she prioritized areas for self-improvement. These processes were

continuous and recursive. In this way Mrs. Hill illustrated Halverson's (2004) position when he suggested successful school leaders use their phronesis, practical wisdom, to fit technical and theoretical knowledge gained from PD into their context of practice.

Halverson's (2004) position was that phronesis guides problem naming and problem solving through the integration of the mental processes of (a) moral perception, (b) deliberation, and (c) reasoned choice (Fowers, 2003). Moral perception requires knowing how to interpret the situation by describing and classifying it. Sherman (1989) suggested that circumstances faced by practitioner do not come pre-labeled as a particular situation; instead the situation must be sorted out by the practitioner through deliberation. Sherman's assertion supported the importance of reflection in action (Schon, 1983) by these principals as they chose to make adjustments in their practice after reflecting on their learning.

Further demonstrating how the process of thinking about her practices, reflecting, and problem-naming led to adjustments in her practice, Mrs. Hill continued:

> It's that visibility piece when I had asked staff last year for survey asked them their perceptions of my leadership etc. The perception is that I was out of the building and their perception, they say this frequently, well with your curriculum hat [district Grades K-6 curriculum director] you're not here. The reality is I was here. It's just the layout of the building is very isolated so if I'm in here talking to you or in here talking to kids or parents or other teachers, they think I'm out of the building. So one of the goals is to be more visible and so during changing times, be there in the hallway. You know, try to make sure that I schedule my day as such so I can be out so they see me.

In an effort to be more visible Mrs. Hill spoke of making a small change in her practice that allowed her to be out in the hallways more often. She said:

> So in my leadership class, that visibility piece, you know, they really push that, but that you need to build that culture, you need to be there. I have an inner conflict with getting the job done. I'm literally here 12, 14 hours a day. So anyway that's one thing I think I've shifted into as far as communication. I used to feel that I needed to be available by phone all the time and I found that I let that go to voicemail more often and deal with the face to face contact first whether I'm meeting with you or I'm meeting a staff member in the hall or whatever that may be, that goes secondary. And try to keep up. Get those voicemails and return calls. But just trying to find that own, your own hierarchy of when you can, prioritization of response issues and things.

Mrs. Hill's decision to let phone calls go to voicemail so she could be more visible in the building provided an example of a component of phronesis, deliberation. Mrs. Hill's deliberation was a decision-making process that leads to making choices about the best course of action to take in a given situation. Deliberation required considering how to best pursue a goal, in this case increased visibility, while coordinating of multiple goals and possible competing goals. For Halverson (2004) the component of deliberating as a part of phronesis was expressed in individuals' abilities to frame and solve problems. He found that phronesis was a required prerequisite for the application of expert problem-solving mental models. However, he cautioned that phronesis cannot be reduced to a set of rules employed by experts. The particulars of the next situation will require adaptation of problem-solving practices. The ability to adapt to the next situation requires the individual to make a reasoned choice. Reasoned choice, a third component of phronesis, involved choosing the course of action that would best achieve the most important goals (Fowers, 2003). For Mrs. Hill, her learning suggested that being visible was necessary to build a culture. Building the right culture was an important goal for Mrs. Hill.

Likewise, other principals in the present study talked about taking steps to build the right culture, including a culture of trust. Mr. Washington was focused on gaining the trust of the new parents whose children were moved to his school when their school closed. He stated, "Trying to help the new people feel comfortable. Kids and parents, and it's always the adults that generally require a little more TLC. Cause the kids, after the first day of school they weren't afraid of the new building."

Mr. Mitchell spoke extensively about the particular contextual details of his community. Clearly, his phronesis, his intimate knowledge of his community, guided his thinking about his practice. Recalling events of a few years past he explained:

> And then my friend retired from the assistant principle ship at the high school and they asked me to step in. I'm going to say about six or seven years ago, they cut back and my job was eliminated. So I, without a job and as fate would have it, the elementary school principal quit in April and just walked out and then they hired me to be the principal up here.

Mr. Mitchell further explained that a few years after becoming the elementary principal he was asked to also serve as the superintendent.

> I'm considered to be part of the community, they felt that they needed a person from the community who is trusted who, to work at creating and re-establishing that trust. It's still, there's still difficulty. It isn't like it's just, it's all gone away, but there's a couple things that you walk through that door you're going to be treated with respect.

Mr. Mitchell confirmed that his understanding of his context of practice guided his thinking about his practice more than new information from PD. He said, "The idea is I'm not going to go to PD come back and redo everything I'm doing. If I wasn't doing the job I'd be fired." He added, "I come in [to PD], gleamed things that I think are useful. I've actually tried some of the ideas, some of the things that we did [in the BLPD training]."

Mr. Mitchell's comments brought to mind Halverson's (2004) suggestion that for principals, phronesis served as a type of executive function to help leaders determine which techniques and theories were appropriate to use in a given situation and to illustrate what the significant consequences of leaders' actions might be. Halverson suggested that this executive function resulted from habitual actions and was personified in the character of the leader.

All of the principals in the present study spoke of the importance of culture and trust in one way or another. For some, building a culture of trust between teachers and themselves was an important goal. Mr. Lexington stated that while he knew he needed to "ramp up" some of his leadership skills in some areas, he was not going to do so at the cost of diminishing the importance he placed on having a good relationship with his staff. For others, like Mr. Washington and Mr. Holland building a culture of trust in the community was an important goal. Acknowledging that the community has a lot of trust in his teachers, Mr. Holland said, "I really want people to work hard at building that."

The principals in the present study, through their reports of how they thought about their practice reflected Aristotle's (1941) position that phronesis in individuals was seen as a pursuit of good for the community as much as the pursuit of personal goals. Halverson (2004) explained that personal phronesis guides one's self-interests and in political phronesis leaders pursue good for the sake of those they lead. Halverson found the concept of the phronetic eye applicable to school leaders who used their phronetic knowledge to implement practices, programs, or policies by understanding the culture, accommodations, and constraints where they lead. As new knowledge caused successful

principals to think differently about their practices, their phronesis moved them beyond an understanding of "what to do" to an understanding of "what is needed" in particular situations. For successful school leaders phronesis is coupled with an ability to take appropriate action to get the work done (Halverson, 2004, p. 2). As a part of taking action, these principals, as well as those in the prior study, shared how they tried new learning out in practice. These findings are presented next.

**Trying Out New Knowledge in Practice**

Daley (2000), in her work on learning in CPE programs, summarized the realities of PD program outcomes. She pointed to work by others finding that some professionals shelved the course materials and never looked at them again, that factors in the work environment prevented professionals from using new knowledge, and that the transfer of learning to practice was seldom immediate or direct. She also pointed to her own work (Daley, 1997) showing that most CPE programs were more effective with novice professionals than expert practitioners.

However, Daley (2001) also found that over the course of their careers professionals developed a "holistic knowledge framework that is used in the context of the services they provide to clients" (p. 39). She noted that this knowledge framework was developed as a result of CPE, discussions with colleagues, and experiences in practice. Daley proposed that a better understanding of how CPE contributed to the professional's knowledge framework was needed in order to improve CPE programs. Likewise, the principals in both the prior study and present study confirmed that their knowledge framework was developed in conversations with colleagues and through their

experiences as well as from PD sessions. An understanding of principals' use of new knowledge from PD in practice can provide a better understanding of the development of a holistic knowledge framework. That holistic knowledge framework includes the leadership skills, which have been found to be important to leadership effectiveness and an understanding of programs and policies. At this time of state and local resources many are asking to what extent current PD is helping principals become more effective leaders. One way to examine the usefulness of current PD is to examine how learning gained from PD becomes meaningful in practice for principals. This final section presents findings of ways principals used new knowledge in practice as well as why they chose to use certain new knowledge gained from PD sessions.

**New knowledge principals used in practice.** Practical application of learning from the BLPD training for principals in the prior study ranged on a continuum from an awareness of their own strengths and weaknesses to a deeper understanding of the importance of the responsibilities of principals to some changes in practice. A few principals did share with others during the BLPD sessions and also with the researcher that they had used some of the BLPD resources and strategies, primarily the surveys. In the present study, Mr. Washington offered that he had used a particular tool for planning for student achievement improvement; however, given all the competing issues he faced each day he found it difficult to maintain the use of that tool. He explained:

> I thought was a great tool, but it's become impossible to maintain. At least the way I'm implementing it's become impossible to maintain. Because I don't feel that I can maintain my focus on that. You know, if that was the only thing I was needing to do, I could probably do that, but you know well today, if you're going to shadow me, we're going to be sitting through a staffing about a non-communicative kindergartner and the father's been

> very reticent to have any assistive technology so we're gonna talk, you know we need to figure out what does the child need and how can we strategize to get dad on board with us. You know that kind of thing, which is an important thing, it's going to help that little girl, but it has nothing to do with my overall building goal of improving achievement building wide.

Reports from principals' in the present study of their use of new learning pointed to very few broad changes in their practice. Instead, these principals consistently talked about their more frequent reflection-in -action as leading them to make small changes in practice. The following comments provided examples of their reflection-in-action. Mr. Washington shared:

> Yet I still think when I've got this thing going on, a change, or even not a change, just a basic managerial responsibility. I think back, ok, got to identify these six, you know, these are the six things that could go, mess up the most, give a little attention to that, you know. Input and that kind of situation awareness.

Similarly, Mr. Lexington shared his practice of reflection and revisiting prior PD learning. He said:

> In reflecting I pull out some of the balanced leadership stuff quite a bit, especially with all the change we've been going through. Just looking at some of the things that, you know, over time that I've done well with and other things that, you know, you don't. So trying to, of those things that I am doing well to help with big change, to make it smoother. And the things I don't, what are those I need to kick in a little bit or ramp up a little bit, again, to make this whole thing smoother. So revisiting some of those skills.

As noted by Daley (2001), professionals knowledge framework was developed through conversations with colleagues and their experiences. Two principals in the present study spoke frequently of gaining knowledge through conversations with others. Mrs. Hill said, "I mean there's a lot of things that I grow from that PD hasn't done, that I

just call people on." Mr. Lexington also turned to others for support and advice based on attending PD sessions with other principals. He said:

> We have people with skill sets that are better in other areas than say mine are; but knowing and realizing you can see those other traits specifically and so when you see somebody with that skill set, you can go to them. At least run something by or affirm what you're doing or they can tell you, 'Hey, boy you're way off base there.'

Several principals in the present study shared some practices they had adopted from their PD experiences. Mrs. Hill shared the following:

> I have a clipboard that says, "Out looking for learning." Because that was part of our PD from the ISD about walk throughs and learning walks. I thought, ok, so out looking for learning is a great thing so I put it on the back of my clipboard and then I have a thing that I can just real quick send a note about what's good happening right when you can get it out there. So that's the intent and so I've talked to both staff and students so they're aware.

Several principals both in the prior study and in the present study reported using protocols and survey tools they had learned about in PD. While the concept of surveying staff and parents was not new to these principals they liked receiving new tools. Mrs. Hill explained that while she has always done activities with her staff that are engaging, new tools received from PD are helpful. She said, "I like the protocol specifically that Balanced Leadership had because it was different than some of the things I've had before. It was new for me to try and to use. I like that. I felt that it was productive."

Mr. Washington mentioned a personal take-away of his from the BLPD was to keep in mind the importance of input, communication, situational awareness, and order when managing his leadership responsibilities. Mr. Holland also spoke of finding value in listening to his staff and how he was applying that learning. He said:

> That's a big one too that we've done more of is reflecting. The other piece too might be to add how they always say the answer is in the room, also maybe adding the piece of using the gifts that we have with our staff and having them be the 'hear from' people?

Another of Mr. Holland's take-aways from PD was that he needed to improve his skills in the area of curriculum involvement. He talked about how that learning had influenced his practice. He said:

> My weakest area would have been the curriculum piece and so I really made a point this year. That was something I felt I had to be responsible for anyway, but I'm jumping into those and doing it at a greater pace. Mine [goals for building] have been more curricular in nature. Are we truly teaching what we are supposed to teach, expected to teach. That's the piece that's coming back that I'm using more.

Mr. Holland was one of the few principals to voluntarily articulate how he thought his changes in practice had diffused to his teachers. He explained:

> Working on that core curriculum piece, wow. I think they're getting it and I think the biggest thing too, I thought about it the other day. We talk about how the kids have to experience and teach each other and you have to have the kids active. And so often I think since I, and you may be that type of person too, if we have a situation "I'll just take care of it." Now I'm really allowing them to take care of the baby and to experience it so they can understand that they can live it, they can breathe it, and I think before we had a propensity to, we helped but they always said if you feed me I'll do it. Well I'm not feeding anymore- you're the trail blazer.

His changes in practice were, for him, illustrative of changes in how he viewed the role of leadership in this school. He said:

> I looked at it how we're structured in the leadership role as well, not as a district but as a building, so with the changes of the [curriculum] core and all of that what we've really had to do, if I remember correctly that's part of what the problem would support, is that each person is becoming a leader of themselves and a leader of their grade level so it's kind of, um shifting I think even though I always thought I was a very good collaborator and so on, I just think that they have a bigger responsibility,

> they're taking a bigger responsibility leadership and they're feeling it and they're believing it.

Nevertheless, Mr. Holland, like the other principals in the present study, maintained that his changes in practice were slight and as such barely discernible to his teachers. He said, "I haven't really changed the manner in which I introduce something new necessarily? It's more the rate at which they possibly take it and run with it and I don't even think they realize it."

These reflective comments by the principals provided an example of what Halverson (2004) called phronetic narratives. Halverson offered that phronetic narratives can serve as a resource to guide the learning of school leaders. Phronetic narratives help document and communicate how successful school leaders pull together knowledge from policy makers and researchers with an understanding of their community's needs and dispositions.

In a similar way Mrs. Hill shared how she had used her phronetic knowledge to adapt theoretical knowledge to her own practice. That theoretical knowledge was that it was important to have "everyone on board" with new changes. Mrs. Hill shared:

> I think in the past, some people are big as far as getting people on board, making sure you go to the right staff members to make sure they are in on those key initiatives and I think as I've evolved in administration I've kind of come, to me personally, to the realization that I have to just make some of the hard decisions regardless. So like I said it's a district initiative, if it's something that is a cut, if it's something like that you know I let them know how it's coming but I don't, I'm not a finger pointer, but I do just lead forward.

Then, she added a comment that illustrated how her phronesis was serving as an executive function, bridging the gap between theory and practice:

> I kind of hopefully have my moral compass to go through and guide me to say and do the right things. Keeping my moral compass with what's right and educating and pulling everybody on board from teacher to students to parents all to be able to be in line and understand that this is where we're headed and this is what we have to do and this is what I'm required to do so I need you to run the same page.

Thus, principals reported making changes in their practice by considering new knowledge, whether it was leadership theory and research or policy mandates, in light of their specific situations. Principals then made slight, incremental changes in their practice as a result of new knowledge. These findings of slight changes in practice were supported both by Daley's (1997, 1999) work and by recent research findings from Barnes et al. (2010).

Daley (1997, 1999) found the nurses she studied thought about what they learned in CPE courses and linked pieces of their learning together in a way that was meaningful for them. One nurse, using the metaphor of a mosaic, said, "I take little pieces of what I learn from many places and put them together until I have my own picture" (Daley, 1997, p. 109). Barnes et al. (2010) looked at the relationship between learning, knowledge use, and change in a group of urban principals to understand how practitioners gain expertise. They found while principal competencies were developed within continuing PD activities, the outcomes of these program interventions were incremental changes in principal leadership rather than dramatic changes.

When asked if he had made changes in his practice as a result of any PD learning, Mr. Lexington said:

> Yes, but nothing's been dramatic change. There hasn't been what you'd say there's been dramatic change. Uh, you noticed some of the things again; things that you do very well to make sure you just, you don't let those go

> on the wayside as you try to pick up the other things. It's like the whole famous balance. You've got to balance all those things.

Mr. Mitchell echoed Mr. Lexington's comments:

> We're not going to change it all. What we're looking for is ideas and if you come up with a good idea, it's worth the experience. So you gleam the stuff that you can use and you can take back. You might go to a three day conference and only come up with one idea. But then it's worth it. I think one of the problems with a lot of stuff that somehow this is, we were just going to come in and we're going to go to a PD and all of the sudden that's going to boom, it's the magic pill and we're just going to transform everything.

In addition to asking principals to describe their changes in practice as a consequence of gaining new knowledge, the researcher also asked principals to comment on what made it likely that new knowledge would transfer to practice. Those findings are presented next.

**What makes professional development learning useful to principals?** The researcher asked principals to talk about what made them decide to use something that they learned about in a PD session. The principals in the present study added voice to several scholarly findings with their responses (e.g., Kochran et al., 2002). These principals were most likely to use new knowledge that fit with current school improvement goals, that would work in their particular context, and that would be supported by their district.

First, Mr. Holland summarized how and why he makes a connection with new learning. He said:

> When I find something that I think is real, I can apply it to everyday and it will make a difference and it catches me. So I guess it starts with me and it really is up to me in that sense and then I want to make sure that it's going to move us forward. You don't know that but that's what you, you have a

> sense of determining that in your own mind. Usually it's a case of I have ideas of what am I after, so that's what I'm listening for.

In his comment, Mr. Holland demonstrated PD learning that transfers to his practice was new knowledge he can use to move his school forward.

Similarly, the coherence of new ideas and practices with current school improvement goals was important to Mr. Holland and the other principals if they were going to transfer new knowledge to their practice. Mr. Holland was adamant on this point:

> But I'm also not going to add things to the plate and the worst thing you can do is, for us to go away from differentiated instruction data and depth of instruction. We're not going to go away from that. We're not going to go away from Everyday Math; we're not going to go away from [Reading] Cafe.

Mr. Holland's comments provided support for the assertion by Kochran et al. (2002) that too often quick fixes to problems are offered in some PD sessions. Professional development that has as its goal the improvement of principal effectiveness was defined by Bredeson (2002) as "learning opportunities that engage educators' creative and reflective capacities in ways that strengthen their practice" (p. 663). These principals all were able to share their school-specific goals for improvement and initiatives in place to support those goals. As Daley (2000) noted, the context of practice guides what new knowledge professionals seek and how they use it.

Second, Mr. Lexington shared his conviction that it is important to "stay the course" when a new idea is implemented. He said:

> We find something, we try it, do we follow through with it? I mean, you know, let's stay the course with something for a while. You know, what's the newest thing of the week? You know, what's the PD session of the

> week, what's the best practice of the week? Uh, no let's find something and delve into it, let's really try to get something and keep with it and follow through.

Similarly, Mrs. Hill cautioned about replacing practices with new ones too quickly. She said:

> I don't want to be one of these that I'm flipping every year because we don't think it works. Give it a chance and maybe tweak it instead of just chucking it. You have to give it time to be able to see although I'm not going to sit here and say that I'm digging my heels in.

Third, several principals utilized their phronesis when evaluating whether or not to incorporate PD learning into their practice. Mr. Holland showed how drew on his phronesis when he said:

> I'm trying to decide always what is the best route to do things and then, of course, I know the staff well enough that I know which door I have to go through…and if it will work in our building. I think I know our building well enough. I know what to present or what not to.

Mr. Holland's comment also exemplified the executive function of phronesis as described by Halverson (2004). Here, Mr. Holland's phronesis is part of his habitual action and is personified in his character.

Mr. Lexington also expressed that whether or not new knowledge can be applied in his context was an immediate consideration of his. His comment suggested skepticism of some new ideas:

> Something all of a sudden becomes a best practice but where they got their model from, their best practice, you're sitting there going, well, is it replicable, is it, well they did this and they were able to do these kinds of things but yeah they were able to do that in their contextual little bubble, that sort of thing.

Finally, like the principals interviewed by Leithwood, Anderson, et al. (2012), these principals considered whether or not they would have district support when deciding if they will use new learning from PD. District support meant support from their supervisors as they made changes in their practice after PD experiences. Speaking of the being supported when making changes in practice, Mr. Washington said:

> I think the big thing is it's coming from the support from the top. That's the big thing because, you know, to do some of this stuff in this district it's very likely that there's going to be some push back that's going to get to the board members and then it's going to get to the superintendent. Then if a principal does not feel like they really, someone really has their back and says what they're doing is the right thing, it's not going to go very far. You know, cause why would someone put their neck on the line. Even though this is what's best for kids. I feel very confident this is what's going to get my kids to the next level, but if you're thinking you might not have a job tomorrow because of the flack that it's creating…..

As a former reading specialist for the district and in her dual role as principal and Grades K-6 district curriculum director, it was not surprising that Mrs. Hill valued on-going PD. However, her comment suggested that this value was not shared throughout the district leadership members. She said:

> I mean we have a good percentage of educators as a whole whether they're administrators or teachers that don't feel they need that [PD]. What they're doing is fine and they want to stay on that path. There certainly are teachers that thirst for that and go look on their own and create and do that and same thing with administrators, but I don't think that there's, you know, I don't think in [district name] anyway we have a system in place. You know, or maybe it's, I don't know if it's beyond [district name]. I don't think there's that value like in the, I always compare to the medical field. I talk to my doctors, I say when, how much professional development do you get a year and they tell me exactly how many hours they have to have. So they can, when the newest procedures and medicines and-- We don't do that. We as a, and I don't know if it's a system thing, if it's bigger than just [district name], because I've always been here educationally. So I don't know how far that reaches out, but I see here we don't have that culture.

These principals' comments added support to the work of other scholars studying PD programs and professional growth. Guskey (2000) noted that he added organizational support and change to his model of professional development evaluation because he found that a previous model (Kirkpatrick, 1996) did not sufficiently explain why, despite the fidelity of training program implementation, PD efforts were not producing results for student learning. Recently, Leithwood, Anderson, et al. (2012) reported district conditions having the greatest positive contribution to a principal's sense of efficacy. Investment in both school and district level leadership was ranked third out of eight conditions by principals. The enactment of this investment was "provides a wide range of professional development opportunities to help build the instructional leadership capacities of principals" (p. 122).

Thus, the evidence provided by these scholars and others (i.e., Darling-Hammond et al., 2007; Kelley & Shaw, 2009) that job-embedded, on-going PD that includes job-related problem solving and follow-up support in the form of networking, coaching, and mentoring was confirmed by the principals in the present study. Mrs. Hill spoke about the necessity of follow-up sessions to PD. Recalling a district-wide vocabulary initiative in the district a few years ago, she said, "We didn't visit it, we didn't retrain administrators. So that fell off so we have to make sure we build in that follow up." Mr. Washington was even more specific about the importance of follow-up to facilitate the transfer of new knowledge into practice. He said:

> I think that, I feel like where I could benefit would be some master principal mentoring. You know? Um, someone to come in and make some third person observations and ask me, you know, 'Mr. Washington, you've

> done this. Why did you choose to do it that way?' You know someone like that that could, you know, basically what I'm trying to do for teachers.

Thus, these principals sought out and chose to use new knowledge gained from PD sessions that provided them ways to move beyond their current ways of functioning in order to more effectively meet their school's current goals amid a context of increasing accountability and decreasing resources. Given the constancy of changes in education in recent years, they valued learning something new that they and their teachers can "stay the course with," adapting as needed to fit the needs of the teachers and students. The principals in the present study showed evidence of their use of phronesis as they evaluated new knowledge in terms of what will work in their school with their teachers, students, and parents.

## Summary

The purpose of this chapter has been to present findings that validate and refine the prior research model representing principals' acquisition, contextualization, and application of new knowledge. Findings have illustrated the role of sensemaking in principals' acquisition and contextualization of new knowledge. Additionally, findings from the present study have confirmed and expanded the understanding of the mediating roles of context and phronesis in connecting principals' PD to their practice. The final chapter will further discuss the results of the present study and address the research questions posed in earlier chapters. The final chapter will also discuss the limitations of this study and thus, the implications for further research.

# CHAPTER V

# SUMMARY OF FINDINGS AND CONCLUSION

This case study research was designed to test, validate, and refine a prior research model of principals' acquisition, contextualization, and application of PD learning. The prior research model emerged as part of the findings from the School Leadership Improvement Study (SLIS), an IES sponsored randomized control trial designed to test the treatment fidelity and school-level efficacy of McREL's Balanced Leadership Professional Development® program for principals in rural Michigan elementary schools.

In response to demands and increased expectations for school principals, the number and types of professional development (PD) programs for principals has increased. Simultaneously, concerns have been raised that current PD may be inadequate to help principals become more effective instructional leaders (Bredeson, 2002; Firestone & Riehl, 2005; Lumby et al., 2008; Peterson, 2002). Despite the considerable resources spent on seminars and workshops for principals, few studies have documented how principals process and apply knowledge gained from PD experiences. An insight into the thinking processes of principals can lead to a better understanding of how to deliver PD for principals. In addition, an understanding of the kinds of PD that enhance principals' leadership capacity can provide information about how to facilitate the ongoing development of instructional leaders.

In recent years, much scholarly work has been dedicated to examining characteristics of effective PD programs (e.g., Darling-Hammond et al., 2007). At the same time, some scholars have suggested that the consideration of program characteristics alone is insufficient when studying principal PD opportunities. Some of these scholars have called for more empirical work aimed at evaluating the outcomes of PD as measured by student achievement (Firestone & Riehl, 2005; Lumby et al., 2008; Peterson & Kelley, 2002; Smylie et al., 2005). However, recent findings (Miller et al., 2012, 2013) found that although principals reported gaining knowledge and skills following participation in a leadership development program, the intervention had no significant outcomes on teachers or student achievement.

Therefore, in addition to examining the characteristics of PD programs and the impact of principal PD on student achievement, some scholars have proposed discourse about PD should also be informed by an understanding of professionals' perspectives of the PD experiences (Barnes et al., 2010; Dall'Alba & Sandberg, 2006; Webster-Wright, 2009). Webster-Wright (2009) asserted that professional knowing is embodied, contextual, and embedded in daily experiences and reflective action. Therefore, she suggested researchers embrace a more holistic study of PD and listen to professionals talk about their learning experiences. The present study adopted this approach to the study of principals' PD by examining professional learning from the learner's perspective, that of the principal.

This present study built on findings from prior research, the School Leadership Improvement Study (SLIS), by probing further how principals acquire, contextualize, and

apply new knowledge gained from PD experiences Therefore, the data were analyzed using the prior research model for principals' acquisition, contextualization, and application of professional development (see Figure 1) as the conceptual framework. That prior research model suggested that the acquisition of new knowledge was facilitated by learning in a social context. Principals reported value in learning new information in a group and then using that information for problem solving in a group. The opportunity to learn in a social context also created cohesion among the principals beyond PD sessions. The prior research model also suggested principals contextualized new knowledge by considering the structural, political, and human relations conditions in their particular schools. Findings from the prior study suggested principals' application of PD knowledge spanned a continuum from a deeper understanding of practice to some small changes in practice. In addition, a principal's phronesis, or practical wisdom, was found to mediate the connections between knowledge acquisition and its application (Schroeder & Madsen, 2011).

Also included in the conceptual framework for the present study was Daley's (2000) model of CPE, Halverson's (2004) concept of phronesis for school leaders, and Weick's (1995) theory of sensemaking in organizations. Both Daley's model and Halverson's work were used in the prior study and formed the conceptual framework for the prior research model. Daley's (2000) work linked knowledge development to the professional practice and the context of practice. Daley proposed that knowledge developed through constructivist and transformational learning was immediately amended in the context of the professional's practice. Her model (see Figure 2) provided

an understanding about the complex interrelationships between knowledge, context, and professional practice.

Halverson's (2004) work provided insights into the ways school leaders thought about their context as they considered incorporating new knowledge into their practice. His work provided an elaboration of the link between knowledge development and context and professional practice put forth by Daley (2000). In particular, he suggested that the process by which school leaders applied new knowledge to the particularities of their specific context represented an important area of leadership knowledge.

Findings that emerged from the present study led to the inclusion of Weick's (1995) theory of sensemaking in organizations in the conceptual framework. Analysis of the data showed that the process of acquiring and contextualizing new knowledge for principals was a process of sensemaking. For the principals in the present study their sensemaking was driven by operating in a context of change. A context of continuing change in education due to increasing accountability expectations led principals to feel overloaded by the large amounts of varied and ambiguous information they received. In addition, their context was characterized by insecurity because of several years of budget deficits. In their reflections on learning principals in the present study demonstrated several properties of sensemaking as outlined by Weick. As principals processed new knowledge, they endeavored to affirm their identity and to make sense of their experiences retrospectively. Principals demonstrated the social nature of sensemaking in their consideration of human relations as they processed new knowledge. The principals' efforts to make sense of their situation were ongoing. The actions taken by principals

with their new knowledge were intended to bring order and stability to their context of continuous change and uncertainty.

This qualitative case study research was designed to test, validate, and refine a prior research model of principals' learning in PD. The context for this case study research was rural elementary schools in another Midwestern state; so findings are not intended to be generalizable to other populations. Instead the findings from the present study are intended to offer insights into assessment of principal PD programs and the kinds of PD that the principals in the present study reported enhanced their' leadership skills. These findings may begin to develop a theory into practice model that represents how principals learn during PD and bring that learning into practice. The findings of the present study are summarized next.

## Summary of Findings

The intent of the present study was to build on recent findings from prior research. The three research questions presented in Chapter 1 were intended to test the prior study findings. Those questions were:

1. How do principals process and contextualize their PD learning both in the PD context and once they return to their schools?
2. Do principals apply their PD learning in practice, and if so, how do they do that?
3. What aspects of PD learning experiences are most useful to principals and why?

In response to the three research questions, the prior study findings were validated by the results of the present study.

The three research questions were also intended to uncover any additional information about principals' learning process during and after PD and their use of new learning in practice. The additional findings that emerged from the present study comprised the refinements of the prior study model of principals' learning. Figure 9 represents the validation and the refinements to the prior research model that emerged from the present study.

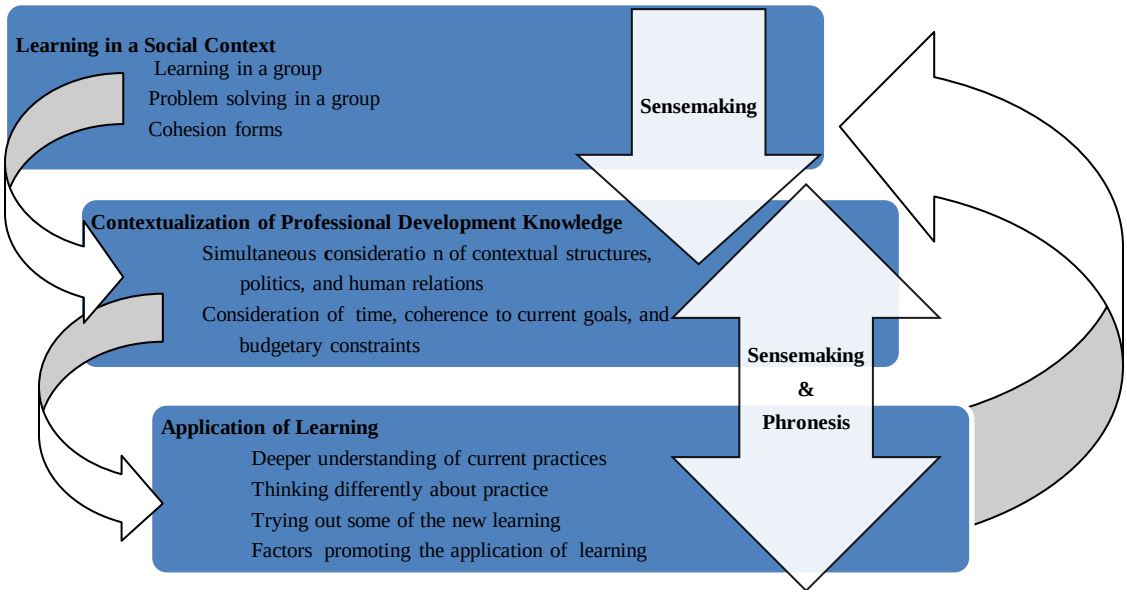


*Figure 9.* A revised model of principals' acquisition, contextualization, and application of professional development knowledge.

The findings related to each research question are presented next. For each question, evidence validating the prior research model will be summarized first followed by evidence supporting refinements to the model.

**How Do Principals Process and Contextualize Their Professional Development Learning?**

Findings in response to the first research question were that principals processed their learning according to a constructivist theory of learning. This finding was supported by Daley's (2000) work that knowledge is developed through constructivist learning. The principals in the present study made meaning out of new knowledge by combining it with prior knowledge gained from their experiences. Learning for the principals was both an individual and a social activity. Individual reflections about new knowledge came from principals' consideration of whether or not new information would be applicable in their school's context and useful in moving their school forward toward its goals. Social learning occurred as principals' discussed new information with each other and dialogued others during PD activities. Principals appreciated learning with colleagues who had something in common with their context of practice such as another middle school principal, another principal who had experienced a school closure, or another principal struggling to maintain financial viability.

The principals in the present study also expressed value in developing relationships with other principals that extended beyond the PD sessions. They reported contacting new colleagues for advice on problems they believed required skills that weren't their strengths or that were new problems for them. The relationships that

developed during PD experiences provided on-going networks of support for these principals. Supportive networks of other school administrators was a resource that often was not be available to principals in these small rural schools. In some cases these principals were the only elementary or middle school principal, or the K-12 principal/superintendent, and none of them had the benefit of assistant principals. The findings from the present study that principals valued learning in a social context where new knowledge is developed in a group, where problem solving experiences are shared, and where supportive networks formed validated the prior research model.

Principals from the present study shared the contextual constraints and supports that they considered as they thought about new knowledge. Like the professionals Daley (2001) studied, the way the principals viewed their work influenced how they made sense of new knowledge. Learning was processed by thinking, feeling, and contemplating how to act on new knowledge within the context of their practice. For the principals in the present study, like those in the prior study, their context was defined by its structures, politics, and the people who were in the context.

However, two findings related to how principals process and contextualize their PD learning emerged from the present study to offer refinements to the prior study model of principals' learning. First, in addition to employing constructivist thinking to make meaning of new knowledge, principals in the present study demonstrated several properties of sensemaking. Second, findings from the present study revealed new understandings about how principals contextualize new knowledge. It is the refinements

to the prior research model that comprise the focus of this summary of the findings from the present study. Figure 9 depicts the refinements to the model of principals' learning.

**The process of sensemaking as a refinement to the model.** The process of sensemaking has been studied in organizations that have experienced a crisis and in organizations during a period of change (Maitlis & Sonsenshein, 2010; Weick, 1995). In either case, people are attempting to put stimuli from their environment into a framework so that they can comprehend events that are discrepant from their expectations or predictions (Louis, 1980). The principals in the present study had been confronted with many new challenges because of severe economic downturns in their state along with major changes in curriculum, instruction, and assessment for students and evaluations of teachers' performance. Responding to these challenges has required principals to engage in frequent, daily problem setting as a major component of their professional work.

Drawing on work by Schon (1983), Shotter (1993), and Thayer (1988), Weick (1995) noted that in the real world, problems are not presented as givens to the practitioners such as the principals in this study, but rather they are constructed by the practitioners from the stimuli in their environment. In the process of problem naming, practitioners faced an ill-defined situation that initially makes no sense. They had no frame of reference for the stimuli present in their environment. A frame of reference might have come from prior experiences and practical wisdom gained in a certain context that helped a principal understand and explain the current situation.

When a principal's practical knowledge was insufficient to guide problem naming, the process of sensemaking began. Schon (1983) concluded that sensemaking

was the process by which problem naming occurred when professionals named the things they would attend to and framed the context for that attention. Halverson (2004) asserted that successful principals used their phronesis, the deep knowledge of their context, as a guide in problem naming and problem solving. In this way, sensemaking and phronesis were intertwined as principals responded to disconcerting situations by using their knowledge of their context and constituents along with new knowledge to take steps to bring about stability in their environment. Daley (2000) referred to this process as the way new learning is immediately amended by the professional's context of practice. Sensemaking as the process that explained principals' thinking about new knowledge during and after PD experience represents a clarification of prior findings about how principals acquire new knowledge in PD. Another finding from the present study was the new revelations about principals' contextualization of new knowledge.

**Support for the model of principals' contextualization of knowledge.** However, those findings about principals' contextualization of new knowledge that validated the prior study findings will be reviewed first. Principals in the present study, like those in the prior study, spoke of practicing in a context of district, ISD, and state driven structural changes. Those changes included staffing reductions, school closures, and school reconfigurations brought on my economic downturns in the state. Other structural changes included a new teacher evaluation system or the enactment of anti-bullying legislation brought on by legislative mandates from the state driven by national issues. These kinds of changes affected how and where a principal spent their time in

practice. Therefore, these structural changes affected a principal's opportunity to acquire or utilize new knowledge in practice.

Mr. Washington commented that his focus on improving his leadership skills through PD or his own professional reading had taken a "back seat" to helping the new students and their parents feel comfortable at his school after their neighborhood school was closed. Mr. Washington also lamented the lack of an opportunity to acquire new knowledge about the new Common Core Math standards. Not having a firm understanding of changes in the scope and sequence of the math curriculum or the rigor of the new standards left him feeling unprepared to assess teachers' math instruction. Mr. Lexington confirmed principals had received very little PD related to curriculum and instruction as a result of the attention given to closing a school and reconfiguring the others in the district.

Also, like the principals in the prior study, the principals in the present study spoke often of the influence of internal and external politics on their practice. However, the principals in the present study readily reported their practices in place to manage the potential internal politics. They spoke of recognizing the importance of communication like the principals in the prior study; however, they also reported seeking input, recognizing the importance of having "go-to" people, the importance of maintaining order, and other skills learned during PD related to managing difficult changes for teachers. Perhaps in comparison to the principals in the prior study who were interviewed as economic downturns and several new nationally driven changes in education were emerging, the principals in the present study had had time to develop practices to manage

internal politics. External politics were mentioned more often by principals in the present study as compared to principals in the prior study. Mr. Holland's frustration with external politics was evident when he recounted an ISD initiative intended to standardize curriculum scope and sequence across the ISD. Similar frustrations with funding guidelines and truancy cases were expressed by Mr. Mitchell and Mr. Washington.

As in the prior study, a concern for human relations was paramount to the principals in the present study. The principals were concerned with supporting their teachers during new initiatives, Mrs. Hill elaborated that principals needed to not only support teachers but also "understand what teachers are being asked to do." Principals reported that it was important to listen to their teachers. They sought input from their teachers. They listened in order to know what their teachers were ready for and they were flexible with teachers' adoption of new practices. Mr. Holland described this practice as finding a balance between giving his teachers time to digest new programs and the urgency to implement new programs. It was important to principals in the present study, as well as the prior study, to be affirming for their teachers and to be affirmed by their teachers. It was important to show their trust in their teachers and to know their teachers trusted them. For Halverson (2004) a phronesis-based perspective on school leadership gives attention to the patterns of values expressed by principals in the prior study as day-to-day concerns for human relations and validated by the principals in the present study. In addition to validating the prior study's findings related to principals' contextualization of new knowledge, findings from the present study offered additional information about the process of contextualization.

**Refinement to the model of principals' contextualization of knowledge.** The first finding that was new concerning principals contextual considerations was that they did not take the considerations into account separately or even in every situation. As principals' processed new information they did so against a backdrop of having an understanding of the relevant issues in their context. This backdrop could be identified as a principals' phronesis, or practical knowledge. Halverson (2004) proposed that a leader's phronesis serves an executive function to help leaders determine which techniques and theories are appropriate to use in a given situation and to illustrate what the significant consequences of leaders' actions are. As such, phronesis serves as a bridge between theory or policy and practice.

Mr. Holland gave voice to this finding when he said he could not identify what he considered when thinking about new knowledge as a specific contextual characteristic. His considerations were multi-faceted. He also explained that his consideration of contextual factors would vary depending on the situation or the issue at hand. Mr. Holland confirmed what Halverson (2004) and other scholars noted when they said that phronesis could not be reduced to a set of rules, or "if-then" statements followed by experts (Fowers, 2003; Tsoukas & Cummings, 1997). Instead, phronesis is a form of knowledge that develops over time as a leader develops a "phronetic eye," or the capacity and values to recognize situations as worthy of action for the good of the community (Aristotle, 1941).

The second new finding related to principals' contextual considerations as they processed new knowledge was the principals' reports of three new considerations. Those

additional considerations were time required to implement and monitor new initiatives, the importance of coherence of new initiatives with current school improvement goals and successful initiatives in place, and the constraints of budgetary realities that significantly influence principals' decisions about employing new learning.

Mr. Washington considered whether new knowledge was practical and easy to apply in terms of time to implement and monitor for new instructional practices. He said, "I still think that's still the greatest struggle for a principal is how to, how can you get everything done in the time that you have."

Also, all of the principals in the present study were seeking new knowledge to further their efforts to reach school improvement goals. This finding was supported by Daley (2001) in her study of CPE in several professions. She found that the nature of the professional's work and their perceptions of the needs of their clients influenced the kind of knowledge they sought. In addition to seeking new knowledge that was consistent with current goals, Mr. Washington and Mr. Lexington were adamantly opposed to incorporating new knowledge into practice if it was not going to support what was already in place and working. Both noted that nothing is ever taken off "the plate" of the principal or teachers. Mr. Mitchell believed in learning to "use the stuff that you have." Mr. Lexington and Mrs. Hill believed in "sticking with a program," seeing it through for a while before changing to something new.

Finally, without exception, every principal in the present study consideration new knowledge in light of budgets. Principals considered the cost of training and materials associated with new initiatives or programs as well as whether they could sustain a

program in the future. The concern for sustainability is consistent with their concern for program coherence. Mrs. Hill stated that her budget drives decisions about adopting new initiatives. Mr. Mitchell added a caveat to the often-heard phrase "We've got to do what's best for kids." He said, "I say, no, we have to do what's best for kids in the context of the budget. Four of the five principals in the present study stated that their districts would be facing another budget shortfall for the 2012-2013 school year.

In summary, the results of the present study validated the prior research model and added additional insights into the process by which principals acquire and contextualize new knowledge from PD. A deeper understanding of this process can lead to a better understanding of how to design, deliver, and assess PD programs for principals. The second research question was concerned with the outcome of PD programs. Given the resources spent of principal PD, it is imperative to understand if, how, and why principals apply PD learning in practice.

**Do Principals Apply Their Professional Development Learning in Practice, and If So, How?**

In response to the second question, findings from the present study validated the prior study findings. The present study did not provide new findings related to this question, but it did provide further understandings prior study findings. Those prior study findings were that as a result of a PD experience, (a) principals gained a deeper understanding of current practices, (b) principals thought differently about their practices, and (c) principals made slight changes in their practices.

As principals in the present study assimilated new learning through their reflections on current practices they became aware of their strengths and weaknesses. Recognizing strengths in their practice was affirming for principals. Mr. Holland reported that as he learned about the importance of situational awareness he thought, "I wonder how I'd rate there. I'm good at that." On the other hand he also reported that learning about the importance of knowledge about curriculum, instruction, and assessment reminded him that was an area he needed to attend to more.

As principals gained a deeper understanding of their practices, they became more assertive about not letting their strong practices be compromised by any changes in their practices. Mr. Lexington stated he was not willing to "trade off" what he did well in the process of adopting some other skill sets. Mr. Mitchell reflected on a PD workshop that advised principals to unclutter their office because clutter was distracting. He reported he refused to remove photos from his coaching experiences because that role defined him even as a principal. He knew his strengths, he insisted his staff knew his strengths, and while he did glean something from almost every PD experience, he saw no imperative to return from PD and "redo everything." Principals' reflections about their practices after PD provided evidence that in the process of sensemaking they are grounding their identity. As a part of making sense of ambiguity and uncertainty, individuals respond in ways that fulfill their identity needs. Part of sensemaking is the maintenance of a positive self-image by enhancing one's sense of self-efficacy (Weick, 1995, 2009).

In addition to reflecting on their practices, and in particular affirming their strengths, the principals in the present study principals reported that sometimes new

knowledge acquired in PD led them to think about their practice differently. For those principals who described themselves as data principals, PD learning caused them to consider the relational aspects of their work more. For those principals who described themselves as relational people, PD learning led them to focus on improving in areas related to student achievement data. For example, Mr. Holland shared his efforts to improve his knowledge and involvement in curriculum, instruction, and assessment. Mr. Lexington referred to previous PD learning to remind himself of the skills needed to smooth out the transition to the new teacher evaluation system, one that was more data driven.

Most principals reported using tools or strategies gained from PD sometimes. Often the use of new tools was incorporated into previous practices. Mr. Mitchell reported using some tools to seek input from his teachers, but he was also adamant that he had always surveyed his teachers as well as his students before becoming a principal. Likewise, Mrs. Hill used some new strategies to increase teacher engagement in staff meetings. However, because this was a previous practice of hers she was always looking for something new and naturally put new tools to use in her practice. As in the prior study, principals in the present study did not report making big changes in their practice. In fact when asked how he had changed his practice as a result of PD experiences, Mr. Lexington replied "No big changes." Mr. Mitchell was clear that he would not go to a PD program and come back and change his practice completely. His goal from attendance at PD was to "glean" something he can use.

This finding of small changes in practice is consistent with the work of Barnes et al. (2010). Barnes et al. were interested in knowing the extent to which principals changed their practice after PD, the characteristics of that change, and the process by which the change happened. They too found that principals demonstrated refinements in thinking and doing in small incremental ways. Findings from the present study confirmed the role of phronesis in guiding principals' actions that became the small changes in doing their work. Sensemaking, as a cognitive activity, is an on-going process of assimilating new information into an environment of crisis or change for the purpose of taking action to return to order and stability. Phronesis, as a behavioral activity, was the practical wisdom that guided these principals to know which aspects of their schema apply and when to apply them. As Halverson (2004) noted, the school leader who exercises practical wisdom understands when the rules of a typical situation apply, which of those rules to select, and which rules need to be discarded or reformed given the particulars of the circumstance.

The third and final research question asked principals in the present study what made a PD experience useful to them. The researcher probed for this information by asking principals, "What is it about a PD experience that, in your opinion, makes people bring learning to practice?" Probing further, principals were asked, "What makes you decide when you sit in PD conferences and you learn something new to use that knowledge, to try it out, back at your school? Findings based on principals' responses to this question provided a further refinement to the prior research model. Principals responses to these questions may help us know kinds of PD that principals' believe

enhance their leadership skills. As Webster-Wright (2009) proposed, the study of PD can be informed by an understanding of professionals' perspectives of the PD experiences. That understanding can be used to better appreciate how to design and deliver PD for principals.

**What Aspects of Professional Development Experiences Are Most Useful to Principals?**

The principals in the present study demonstrated their efforts at sensemaking and the use of their phronesis as they evaluated the usefulness of PD programs. As a response to the information load and turbulence of change experienced during the past several years, principals searched for plausible responses. A plausible response is reasonable and consistent with previous expectations. A plausible response resonates with people because it is credible (Weick, 1995).

A principals' search for plausible responses in their present context of practice might be illustrated by asking two questions. The first question is, "What's going on here?" The second question is "What do I do?" Principals' reflections captured in the conversations with the researcher represented the talk that is a part of their sensemaking. Reflections and talk lead to actions. Thus, conversation and action are both a part of sensemaking occurring recursively, not linearly (Weick et al., 2005). When the principals in the present study contemplated taking action they used their phronesis to do so. Principals' decisions that led to actions were grounded in their knowledge of what was good for their community. Therefore, the principals consistently reported they would use new knowledge that fit with current school improvement goals, that would work in their

particular school's context, and that would be supported by their district. District support was described by the principals in the present study not only as support when implementing new knowledge, but also support in the form of ongoing follow-up to PD.

First, principals reported PD learning that was most useful was knowledge they could use to move their school forward. Principals discussed subject areas needing improvement and in particular the subject-specific skills needing improvement. Principals were aware of gaps in performance between different groups of students. Several facilitated staff meetings for teachers to discuss strategies to close those gaps. In Mr. Washington's school, the PD day observed by the researcher as part of the third visit to case study schools included an opportunity for teachers to share within and across grade levels gaps in student performance, brainstorm why those gaps existed, and plan how to close the gaps. Likewise, Mr. Holland shared that a gap in performance between elementary students and middle and high school units was a focus of his school's improvement plan.

Principals also described areas of pedagogical improvement needed in their schools. For Mr. Washington he identified teaching to higher levels of thinking as a way to move his school forward. For Mrs. Hill increasing student engagement was a need and thus a focus of PD for her teachers prior to the start of the school year. Mr. Holland sought new knowledge that could help him and his teachers work with data, depth of instruction, and differentiation. He said, "Usually it's a case of I have ideas of what I am after, so that's what I am looking for."

The principals in the present study were not likely to use learning from PD that they considered to be a fad. Mr. Lexington expressed a dislike for the idea of a "PD session of the week or a best practice of a week." These principals were responding unfavorably to the kinds of PD Bredeson (2002) described as convenience courses often characterized by faddish learning experiences that were not aligned with principals' needs or school goals. Principals found PD useful only if it is "real." PD that was real was PD they could apply to everyday and that they could draw an immediate correlation to their work on a daily basis. Thus the first criteria employed by these principals in determining if PD was useful was that it must provide knowledge they could use to reach school improvement goals.

The second criteria by which the principals in the present study judged the usefulness of PD learning was whether or not the new knowledge was applicable in their context of practice. Principals mentioned knowing what would work in their building, described by Mr. Holland as "knowing what to present or what not to." As part of his concern with the ISD initiative to standardize the math curriculum across all ISD districts, Mr. Holland spoke of maintaining his school's current math curriculum because his teachers liked it, the parents liked it, and the students like it. Principals demonstrated in this way that their decisions about use of new knowledge were influenced by the opinions of their constituents.

Mr. Lexington explained that he learned if new ideas were applicable in his school by sending up a "trial balloon with a few people." Mr. Mitchell shared how he learned that more teacher input in decision making was not completely applicable in his

school. He said, “When it was time to hire a new person at elementary, I wanted to have the staff to have the majority input. Well, it's not the usually way it works and well, they weren't quite ready for that.” Knowing what their teachers were ready for influenced whether a principal utilized PD learning.

The final criteria principals in the present study identified as necessary for PD learning to be utilized in practice was the level of district support. Principals called this “support from the top” referring to their superintendents. They felt this support had to already be place if they encountered resistance from their constituents for changes in their practices as a consequence of their PD learning. Without that support principals felt they might have to choose between doing “what’s best for kids and having a job tomorrow.” In addition, use of new learning from PD by these principals would be improved by having master principal mentoring and follow up PD. These findings were consistent with recommendations by Guskey (2000) and Leithwood, Anderson, et al. (2012).

## Limitations of the Study

This study is limited in its data sources and context. Data was collected from a small number of schools (five) in a very rural environment in a state experiencing some of the most severe economic downturns in the country. Data collection was also limited to very small elementary schools and one fifth and sixth grade school. Therefore, the data sources and context for the present study limited the generalizability of the findings to all principals. The issue of generalizability has been debated among many qualitative researchers (Lincoln & Guba, 1985; Merriam, 1998; Stake, 1995). Some have suggested that qualitative research findings provide a “working hypotheses” (Lincoln & Guba,

1985, p. 122). While the particulars of a local context make it impossible to generalize to all situations, where there is similarity between two contexts the findings may offer some insight into decision making. According to Merriam (1998), what is learned in a particular situation can be transferred to similar situations encountered later. For the present study, the generalizability is left to the readers to decide to what extent the findings presented apply to their situation. The researcher has endeavored to provide enough description so that the reader will be able to decide how closely another situation matches the situation described in the present study and thus, make some decisions about transferring the present study findings (Merriam, 1998).

Another limitation of the study is that the researcher served as a principal and therefore, personal experiences could possibly bias the interpretation of the participants' comments. To guard against bias, the researcher consistently engaged in a process of critical self-reflection (Schwandt, 2007). That critical self-reflection included making notes in a journal immediately following each school visit and rereading that journal during the data analysis process. Also, member-checking preliminary findings with the principals in the present study during the second data collection visit as well as triangulation of data using field notes were strategies employed to protect against researcher bias. Finally, the researcher continually reread the principals' interview transcripts throughout the report writing looking for additional evidence to confirm, or disconfirm, the findings as they were being reported.

## Recommendations for Future Research

The intent of the present study was to build on prior research that examined how principals acquire, contextualize, and apply PD learning in practice from the perspective of principals. A better understanding of these processes of acquisition, contextualization, and application of learning can lead to a better understanding of how to design and deliver PD for principals. While findings from the present study did validate the prior research model and also provide additional findings, there are several areas for future research.

First, the model that emerged from the present study (see Figure 8) should be tested in other varied contexts. The model should be tested in urban and suburban settings and in settings with greater racial and ethnic diversity than that of the present study's setting. It would also be informative to include more middle school principals as well as junior high and high school principals in the sample.

A second area of inquiry that should be more deeply explored in future research is the question "Do principals apply PD learning in practice?" Answers to this question need to be sought from the perspective of the principal and the perspectives of the teachers. Further probing into this area of inquiry should include asking how and why principals apply new learning followed by many observations at the school. This area of research would require a much more prolonged engagement in the research setting than occurred in the present study. A better understanding of how and why principals apply PD learning in practice can help determine to what extent current PD is helping principals become more effective leaders.

Third, because ultimately leadership effectiveness is determined by teacher and student outcomes, future research that included an evaluation of school improvement efforts in conjunction with the study of principals' application of PD learning might provide the most information about the kinds of PD that lead to the acquisition of instructional leadership skills which have a positive, significant impact on teaching and learning.

## Recommendations for Practice

The findings from the present study provided insight into how principals' acquire and process new knowledge from PD experiences. It is important to note that much of the PD received by the principals in the present study came from professional association meetings, ISD meetings, and district meeting. The PD the principals received was almost exclusively about newly legislated mandates, new policies, new programs, or ISD or district instructional initiatives. Often this type of PD is delivered using the didactic instruction approach described by Nie and Lau (2010) in their assessment of teacher education programs. This instructional approach has as its goal knowledge transmission with the recipient (the principal) passively receiving new knowledge. The findings from the present study supporting prior research findings that principals learn in a social context developing knowledge through both individual and social constructivism are applicable to PD experiences intended to deliver new knowledge in the form of policy and mandated programs.

Findings from the present study revealed that principals engaged in a process of sensemaking as they acquired and thought about new knowledge. As Daley (2000) found,

new knowledge is immediately amended by the professional practice and the context of the professional's practice. For the principals in the present study the process of making new knowledge meaningful (making sense of new knowledge) included reflections on past actions, reflections on their sense of self as a principal, and searching for plausible responses to their current challenges. Sensemaking for the principals was ongoing and social. Sensemaking began in the PD session and was ongoing as the principal returned to their school and continued to think about the new knowledge. When principals talk about needing time to process or "digest" new learning perhaps they are talking about the process of making sense of new knowledge. As Daley (2000) found, the process of new knowledge becoming meaningful involves professionals thinking, feeling, and acting on new knowledge in their context. Implications of this finding for practice are that PD learning should take place in a social context where principals can talk through the process of making new knowledge meaningful given their understanding of their contextual constraints and supports. Mrs. Hill explained this implication for practice best when she said, "I don't think I could really absorb or be able to practice or feel, be able to take risks or move forward without bouncing off others." Support for PD learning in the form of coaching and follow-up sessions would also provide additional occasions for sensemaking.

Findings from the present study clarified that contextual considerations are not neatly defined factors, but rather are unique to each principal's context. Also as Mr. Holland revealed contextual considerations may vary within the same context given the issue at hand. This finding supported Halverson's (2004) assertion that the phronesis of

school leaders represents an important form of leadership knowledge needed to fit technical and theoretical knowledge gained from PD into the context of the practice. Another implication of interest for those who design and deliver PD for principals was the consist identification by principals in the present study of three additional contextual considerations influencing their consideration of new knowledge. Those considerations were (a) time needed to implement and monitor new ideas, (b) coherence of new ideas with existing programs and goals, and (c) affordability to implement and sustain new ideas.

Perhaps the most important implication for practice to emerge from this study was the finding that new knowledge was applied by principals in small ways and generally not discernible by their teachers. This finding confirmed work by others (Barnes et al., 2010) and points to the futility of expecting wide scale changes in principal practices that will lead to immediate improvements in student performance from PD designed and delivered to principals. This finding may also suggest the need to reconsider what value there is in delivering PD, even knowledge about policy and program changes, to principals in isolation from teachers.

## Conclusion

Results from the present study validated the findings that emerged from the prior research and led to a model of principals' learning in PD. In addition, findings from the present study provided refinements to the prior research model in the form of new findings. Therefore, the present study has added to the body of knowledge about how principals acquire and apply their ongoing PD experiences to their practice. As

accountability expectations for schools increase and as research continues to find support for the small, indirect, but significant influence principals have on student achievement, those who study PD for principals seek a better understanding of "how to help principals develop the capacities that make a difference in how schools function and what students learn" (Davis et al., 2005, p. 4). Also in the present economic situation where districts are being expected to do more with less funding, many district leaders are seeking to justify the resources spent on leadership development by asking to what extent current PD programs for principals will have a positive, significant impact on teaching and learning.

The present study contributes to the field of research on PD for principals by providing validation of prior research findings that offered insight into how principals learn and put new knowledge to use in practice. Additionally, the present study added some new insights into the processes employed by principals as they acquire, contextualize, and apply new learning from PD experiences. The findings from the present study can be useful in informing the assessment, design, and delivery of PD programs for principals.

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## APPENDIX A

## DATA SOURCES: PRINCIPAL PROFILES

Table A-1

*Principal Profiles*

| Case Study School Principal | Gender | Years' Experience in Education | Years' Experience in Leadership | Years at Current School | Highest Level of Education | Other Responsibilities |
|---|---|---|---|---|---|---|
| 1 | M | 24 | 16 | 5 | Some coursework beyond Masters' degree | Director of State & Federal Funds for district; School Improvement Director for district |
| 2 | M | 36 | 17 | 6 | Some coursework beyond Masters' degree | Coordinator of Adult Education for district<br>Chairperson of district 2nd Grade Professional Team |
| 3 | M | 30 | 24 | 18 | Some coursework beyond Masters' degree | |
| 4 | M | 38 | 7 | 7 | Some coursework beyond Masters' degree | Director of Transportation for district<br>District Superintendent |
| 5 | F | 15 | 4 | 2 | Masters' degree | K-6 Curriculum Director |

## APPENDIX B

## DATA SOURCES: DISTRICT PROFILES

Table B-1

*District Profiles*

| District | Total Student Enrollment | Number of Campuses | Includes Case Study Schools | Locale Code (based on U.S. Census Bureau definition) | Local Population (2010 census) | Local Economy |
|---|---|---|---|---|---|---|
| A | 3073 | 8 | 1,2,5 | 33[a] | 10,355 | Manufacturing |
| B | 526 | 2 | 4 | 43[b] | 872 | Agriculture |
| C | 1097 | 3 | 3 | 43 | 656 | Agriculture |

[a] Town, Remote: census- defined territory inside an urban cluster that is more than 35 miles from an urbanized area.
[b] Rural, Remote: census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urbanized cluster.

## APPENDIX C

## DATA SOURCES: SCHOOL PROFILES

The data presented in the following tables are taken from 2011-2012 pupil headcount at www.michigan.gov/cepi.

Table C-1

*Student Demographics—Pupil Headcount*

| School | Kindergarten | 1st grade | 2nd grade | 3rd grade | 4th grade | 5th grade | 6th grade | Total Males | Total Females | Total Enrollment |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 66 | 70 | 55 | 51 | 42 | 0 | 0 | 139 | 145 | 284 |
| 2 | 87 | 58 | 53 | 43 | 58 | 0 | 0 | 136 | 163 | 299 |
| 3 | 122 | 83 | 74 | 82 | 69 | 2 | 0 | 206 | 226 | 432 |
| 4 | 55 | 49 | 43 | 42 | 30 | 33 | 0 | 127 | 125 | 252 |
| 5 | 0 | 0 | 0 | 0 | 0 | 220 | 241 | 214 | 247 | 461 |

Table C-2

*Student Demographics—Ethnicity*

| School | American Indian | Asian | African American | Native Hawaiian | White | Hispanic | Multiracial | Percent White | Percent Other |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3 | 0 | 3 | 2 | 262 | 8 | 6 | 92% | approx. 8% |
| 2 | 2 | 2 | 2 | 2 | 284 | 3 | 4 | 95% | approx. 5% |
| 3 | 1 | 1 | 0 | 0 | 406 | 16 | 8 | 94% | approx. 6% |
| 4 | 0 | 0 | 4 | 0 | 241 | 5 | 2 | 96% | approx. 4% |
| 5 | 1 | 4 | 2 | 1 | 425 | 16 | 12 | 92% | approx. 8% |



Table C-3

*Student Demographics—Meal Eligibility*

| School | Eligible for Free Meals | Eligible for Reduced Meals | Percent FRL |
|---|---|---|---|
| 1 | 160 | 34 | 68% |
| 2 | 206 | 14 | 74% |
| 3 | 173 | 67 | 56% |
| 4 | 164 | 14 | 71% |
| 5 | 225 | 45 | 59% |

Table C-4

*MEAP Results*

| School | Year | 3rd Grade Reading | 4th Grade Reading | 5th Grade Reading | 3rd Grade Math | 4th Grade Math | 5th Grade Math | 6th Grade Reading | 6th Grade Math |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2010 | 95.3 | 92.9 | 86 | 95.5 | 94.7 | 82 | NA | NA |
| 1 | 2011[a] | 77.8 | 80.5 | NA | 26.5 | 30 | NA | NA | NA |
| 2 | 2010 | 85.2 | 89.7 | 82.5 | 96.3 | 93.2 | 84.6 | NA | NA |
| 2 | 2011 | 78 | 66.7 | NA | 28.6 | 22.6 | NA | NA | NA |
| 3 | 2010 | 86.4 | 89.3 | NA | 95.6 | 95.2 | NA | NA | NA |
| 3 | 2011 | 57.9 | 70.3 | NA | 34.2 | 51.6 | NA | NA | NA |
| 4 | 2010 | 96.8 | 87.1 | 71.4 | 100 | 90.3 | 60.7 | NA | NA |
| 4 | 2011 | 72.5 | 77.8 | 77.8 | 48.8 | 48.3 | 22.2 | NA | NA |
| 5 | 2010 | NA | NA | NA | NA | NA | NA | 86.5 | 85.9 |
| 5 | 2011 | NA | NA | 72.7 | NA | NA | 21.8 | 72.5 | 22.2 |

*Note.* Tests are administered in October.

[a] Effective with the Fall 2011 administration of MEAP student passing rates required to meet or exceed proficiency requirements (Level 1 or Level 2) were raised from the passing rates in place for the Fall 2010 MEAP administration.



Table C-5

*Staffing Numbers*

| School | Teachers | Instructional Aides |
|---|---|---|
| 1 | 15 | 2.5 |
| 2 | 16 | 2.5 |
| 3 | 21 | 4.5 |
| 4 | 18 | 0 |
| 5 | 18 | 2.5 |

Table C-6

*Current Contextual Challenges as Reported by Principals*

| School | Event | Impact |
|---|---|---|
| 1 | Closure of an elementary school in the district | Principal reports he has 120 new students and families to his school due to new students enrolling in junior kindergarten and new families transferred to his school. The total school enrollment is 285 students. |
| 2 | Closure of an elementary school in the district | Principal reports that ½ of his staff has changed grades, classrooms, or both.<br><br>School now houses 2 district programs, a pre-primary sp.ed. program and a head start program resulting in a "much younger feel to the school." |
| 3 | Principal reports that his school receives a lot of students transferring in from other nearby districts as part of the "School of Choice" program in Michigan. | Being a school of choice results in a challenge for planning for staffing at junior kindergarten and kindergarten grade levels each year. Recently an unexpected number of students enrolling under the School of Choice program led to an additional of a kindergarten teacher and a 3rd grade teacher after the start of the school year. |
| 4 | Financial struggles of the district due to declining enrollment and decreasing funding. | Staff takes pay cuts. Principal took a pay cut in support of staff & community. "Staying financially viable" is reported by principal as his greatest concern. |
| 5 | Closure of an elementary school in the district moved all 5th graders out of the remaining elementary schools into the middle school with 6th graders. seventh graders moved to the Junior High School. | A complete reconfiguration of this school:<br>-change from a 6 period day to a 7 period day for financial reasons<br>-change from a 6 week marking period to a 9 week marking period to be more aligned with elementary schedule.<br><br>Two ISD classrooms that provide special education services are a part of this school.<br><br>Walls were added to classrooms during the summer to eliminate large open concept classroom areas. |